

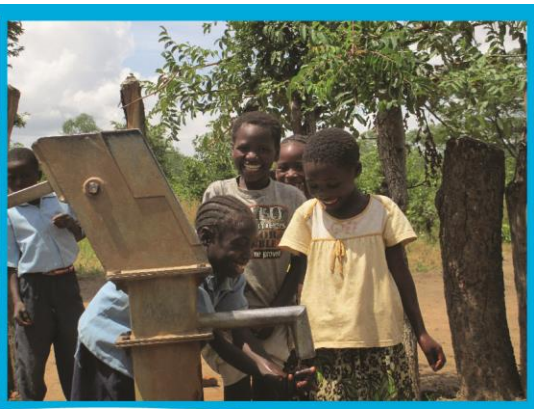

Baseline Survey

School WASH Facility Assessment*

February 2014

*Conducted in Chadiza, Chipata, Lundazi, Mambwe, and Vubwi under a five-year, USAID-funded project to sustainably improve access to safe water, adequate sanitation, hygiene information, and health practices to improve learning environments and educational performance in basic schools.

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Ministry of Education, Science, Vocational Training and Early Education

SPLASH
Schools Promoting Learning Achievement through Sanitation and Hygiene

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APM	Area Pump Menders
MDG	Millennium Development Goal
MHM	Menstrual Hygiene Management
NRWSSP	National Rural Water Supply and Sanitation Program
ODK	Open Data Kit
O&M	Operations and Management
PTA	Parent Teacher Association
SPLASH	Schools Promoting Learning Achievement through Sanitation and Hygiene
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene

EXECUTIVE SUMMARY

This report presents findings of the baseline study of the five-year USAID/Zambia-funded Schools Promoting Learning Achievement through Sanitation and Hygiene (SPLASH) project. The project's overall objective is to sustainably improve equitable access to education through provision of safe water, adequate sanitation, hygiene information, and health practices to improve learning environments and educational performance in basic schools. The project operates in four districts of the Eastern Province: Chipata, Lundazi, Chadiza, and Mambwe. As of June 2013, school WASH activities started in some selected schools in Mambwe, Chipata, and Lundazi. Data were collected also in Vubwi, but no project activities are planned for that district. Results presented here, however, include findings for Vubwi for reference purposes.

The objectives of the baseline are to depict the current picture of WASH facilities and their functionality and accessibility to both abled and differently abled people within the schools as well as surrounding communities.

Using a quantitative research approach coupled with qualitative data collection methods involving field observations, the following were the key findings of the baseline:

Findings of the Study

Demographic Characteristics

The baseline surveyed a total of 633 schools with the largest number of schools being government (64 percent), followed by community schools (33 percent), and lastly grant-aided schools (3 percent).

Enrollment levels in a single school range from 25 to 3,146 pupils for an average of 401 pupils. Chipata has the highest average enrollment level of 479 pupils per school while Lundazi has the lowest average enrollment level of 328 pupils per school. The difference in the enrollment levels between boys and girls was found to be minimal. Depending on the districts, these differences ranged from zero to 5 percent with the boys having the higher percent.

The level of absenteeism by pupils was found to be 19.2 percent for all the schools; with 18.5 percent and 19.7 percent, for girls and boys, respectively. The study further found that absenteeism was higher in Lundazi District, averaging across sites 22.3 percent for boys and 20.9 percent for girls. Although pupil absenteeism was similar by gender, the level of absenteeism among boys was slightly higher than that of girls by an average of 2 percent. The two main reasons for pupil absenteeism were similar regardless of the type of school and gender of pupils: household chores and personal illness.

The total drop-out rate was found to be 3 percent for all the schools, with the highest rate of 6 percent in Chadiza and the lowest rate of 2 percent in Vubwi. Only a 1 percent difference was observed in the drop-out rates between boys and girls in favor of girls. Yet, in Chadiza the drop-out rate for boys was 11 percent compared to 3 percent for girls. Community schools have higher drop-out rates compared to the other school types. The drop-out rate for boys and girls in community schools was 4.7 percent and 4.9 percent, respectively. These rates are above the total average rate of 3 percent. Grant schools seem to have the lowest rate of 1.7 percent and 1.8 percent, respectively, which is below the total average of 3 percent. According to school principals, the major reasons for dropping out of school among boys are largely economic (31 percent) followed by marriage (14 percent). Among girls, on the other hand, the major reasons for dropping out of school include marriage (38 percent), pregnancy (24 percent), and economic necessity (11 percent).

The total of 3,492 teachers to 253,551 pupils enrolled in schools indicates a high overall teacher-to-pupil ratio of 73, with Chipata having a ratio of one teacher per 82 pupils and Chadiza (the lowest): one teacher per 47 pupils.

Availability of Water Facilities in Schools

The baseline study established that many schools (71 percent) had water supply points. However, 29 percent of schools without water supply points are still considered very high, affecting more than 73,844 pupils. The most common water supply source is a borehole fitted with a water pump. This was detected in 83 percent of the schools, followed by protected wells found in 7 percent of the schools.

Water storage is a challenge due to inadequate availability of storage facilities in many schools (67 percent). The baseline observed that only 33 percent of the schools had water storage facilities. These facilities were seen in 47 percent of the grant schools, representing the highest frequency, while only 21 percent of community schools had these facilities.

The majority of schools (88 percent) do not treat the water, a situation that raises health concerns. The study indicates that the lack of water treatment was more common in community schools (91 percent) compared to the other schools, 87 percent and 79 percent, government and grant schools, respectively. Chlorination was found to be the commonly used treatment indicated by 10.9 percent of the schools. Water treatment is mostly financed through school budgets (33 percent) and Ministry of Health support (25 percent).

The baseline findings indicate that many schools (65 percent) share their water facilities with surrounding communities. Only a few (8 percent) do not do so. The highest percentage of schools sharing their water facilities was observed in Vubwi and Chadiza where 85 percent and 82 percent of the schools share, respectively. The lowest percent was observed in Mambwe and Lundazi.

The average number of people accessing water facilities is higher at grant schools (468) compared to government and community schools where 321 and 65 people do so, respectively.

Status, Functioning, and Maintenance of Water Facilities

The proportion of schools that require immediate repairs to their water facilities was found to be relatively high at 39 percent. The highest proportion was observed in Chadiza and Vubwi where 51 percent and 50 percent of the schools indicated the need for immediate repairs to their water facilities, respectively. Specific repairs required: 14 percent of the schools required immediate repairs of water pumps; 7 percent needed replacement of water pipes; 5 percent required well casing repair; about 3 percent required repair of apron; and, lastly, less than 2 percent required repairing of the well cover. However, the largest percent of schools (17 percent) required other repairs that were not specified.

The baseline survey also found that the responsibility for repair of these water facilities largely rests with other people (28.5 percent), PTA members (26.5 percent), school workers (8 percent), and area pump menders (APM) (5 percent). It is not common for pupils to be involved in repairs; only 4 percent of the schools reported this practice.

Although a relatively high number of schools requires repairing their water and sanitation facilities, only 17 percent have the requisite funds; 55 percent of them do not have funds for repairs.

Availability of Toilet Facilities

The majority (92 percent) of the schools surveyed indicated that they have toilet facilities for boys and girls. In addition, 82 percent of all schools had separate toilets for teachers while 10 percent did not. The baseline found disparities in the distribution of toilet facilities across the different types of schools. While all the grant schools (100 percent) and 98 percent of government schools had toilet facilities, a relatively high percent (20 percent) of community schools did not have toilet facilities. Furthermore, pit latrines were found to be the most common type of toilets available to both girls and boys. Pit latrines existed in 59 percent of the schools, regardless of gender. The next common toilet type is the ventilated improved pit latrine, found in 28 percent and 29 percent of the facilities for girls and boys, respectively.

Only a few schools (31 percent) have hand washing facilities with the highest observed in Vubwi (65 percent) followed by Chadiza and Mambwe with 49 percent each. Lundazi had the lowest coverage (23 percent). Community schools were found to be in a worse situation in terms of availability of hand washing facilities compared to the other schools. The common hand washing facilities available include plastic basins on stands reported by 14 percent of the schools followed by open containers reported by 8 percent of the schools surveyed.

Overall, only 6 percent of the schools had soap available at hand washing facilities, and 7 percent reported using ash. The baseline also found that in the absence of soap, a number of schools (60 percent) use nothing but water.

The baseline also found serious inadequacies in the availability of special WASH facilities for girls in many schools. Only 3 percent of schools had menstrual hygiene material; 2.2 percent had clean water inside the toilets; 27 percent had hand washing facilities nearby; 5 percent had disposal facilities for soiled sanitary material; 9 percent and 3 percent had doors and door locks for safety purposes, respectively.

Similarly, only 2 percent and 7.4 percent of the schools had doors and urinals in the boys' toilets, respectively.

Adequacy of Toilet Facilities

The baseline study found that despite availability of toilet facilities in schools, they are not adequate for the number of enrolled pupils. Although the inadequate toilet facilities affect all types of schools, community schools seem to have the biggest challenge for both boys and girls with pupil-drop hole ratios of 82 and 77, respectively. These ratios are far above the recommended limit of 40 boys per drop hole and 25 girls per drop hole.

Access to WASH Facilities by Disabled People

The results of the survey show that most of the schools (78 percent) do not have disability-friendly sanitation facilities.

Most of the schools (62 percent) have sanitation facilities located within a safe and convenient distance of 100 m from the classrooms and water points.

The baseline study found that toilet facilities in many schools (87 percent) are cleaned by pupils who take turns to do so. Very few schools (2 percent) have employed workers to clean the toilets.

Hygiene Promotion in Schools and Communities

The study found that hygiene promotion takes place in the schools, and it is done by teachers and pupils who target both pupils and surrounding communities. However, very few schools (23 percent) had teachers who are trained in hygiene promotion. Most of the trained teachers work for government schools (30 percent), followed by community schools (26 percent), and grant schools (9 percent).

The baseline also established that some schools have organized WASH groups for pupils. However, this was only observed in 22 percent of the schools.

Hygiene promotion in schools and surrounding communities was found to be aided by various learning materials. However, only 2 percent of schools had access to these materials as was indicated by 21 percent, 19 percent, and 2 percent of grant, government, and community schools, respectively.

Hygiene Behavior and Practices in Schools

Analysis of sanitation and hygiene behavior in schools indicates a relatively high percentage of community schools (13 percent) still rely on open defecation. The statistic is lower for government schools where only 1 percent indicated that pupils use the nearby bush to defecate and/or urinate. This behavior was not reported in grant schools.

The baseline also found that few schools (24 percent) had pupils practicing group hand washing. This was found in 11 percent and 10 percent of grant and government schools, respectively. Group hand washing was found to be common in schools that use hand washing facilities such as the common plastic basin on stand and open containers. The baseline further showed that 19 percent of the schools using a plastic basin on stands and open containers for hand washing had the highest proportion of pupils practicing group hand washing. This was followed by 5 percent of schools using open buckets with taps and other containers for hand washing.

Recommendations

1. SPLASH should work closely with schools and surrounding communities and identify more workable and sustainable ways to locally finance water treatment, soap provision, construction, and repair of WASH facilities in schools.

2. SPLASH should promote increased public investment in school hand washing facilities, special WASH needs for girls such as menstrual hygiene management (MHM), disposal bins, secure toilet facilities, etc.

3. SPLASH should lobby government for the construction of more secure toilet facilities to improve pupil-drop hole ratios and meet recommended standards.

4. SPLASH should promote design, location, and provision of disability-friendly WASH facilities in schools.

5. SPLASH should undertake the training of teachers in hygiene promotion, establish WASH groups for pupils, and provide hygiene learning material in schools especially targeting community and grant schools.

6. SPLASH should promote increased WASH promotional activities in schools and surrounding communities spearheaded by pupils, teachers, and local theater or drama groups.

Organization of the Report

This report presents the baseline findings of the USAID-funded Schools Promoting Learning Achievement through Sanitation and Hygiene (SPLASH) project. It has six sections. It starts with the introduction, which provides background information and objectives of the study. Section 2 presents the conceptual framework of the study and discusses the context in which the project operates and in which the baseline was conducted. Section 3 presents the study's methodology. Section 4 focuses on key findings of the study, which are summarized in tabular and graphical formats. Section 5 offers a conclusion. The last section provides key recommendations based on the findings of the baseline.

1. INTRODUCTION

1.1 Background to the Study

The SPLASH project is a five-year USAID/Zambia school WASH program whose overall objective is to sustainably improve access to safe water, adequate sanitation, hygiene information, and health practices to improve learning environments and educational performance in basic schools. The project is premised on the understanding that safe and user-friendly water, sanitation, and hygiene (WASH) in schools improves health, improves educational performance, promotes gender equity, and ultimately impacts positively on communities.

The project operates in four districts of Eastern Province namely: Chipata, Lundazi, Chadiza, and Mambwe. At the time when the baseline was completed, school WASH activities had commenced in some selected schools in Mambwe, Chipata, and Lundazi.

Due to the programmatic evolution of the project, the baseline was implemented in phases. It was first implemented in the last quarter of 2012 in Chipata, Lundazi, and Mambwe when those intervention districts were identified. Baseline data in Chadiza and Vubwi districts was completed approximately 10 months later once those districts were considered as possible project expansion areas. This is a consolidated report covering all districts.

1.2 Objectives of the Baseline

1.2.1 General Objective

The general objective of the SPLASH baseline survey was to conduct a facility assessment in all basic, community, and grant schools in Chipata, Mambwe, Lundazi, Chadiza, and Vubwi districts of Eastern Province.

This activity was meant to serve as the project's hardware and software baseline at the facility level. The data collected will serve to inform and/or adjust project activities and targets, and evaluate project results.

1.2.2 Specific Objectives

The specific objectives of the SPLASH baseline survey in basic, community, and grant schools in the five districts mentioned were as follows:

- To collect data on enrollment, attendance, and absenteeism rates
- To assess the availability and type of water supply points, their functionality, and the existence of drinking water facilities
- To assess the availability and cleanliness of sanitation facilities
- To determine the existence of hand washing facilities with needed supplies, and observe hand washing practices after using the toilet and prior to eating for a sample of students
- To assess WASH promotional activities
- To assess the coordination role of the district water, sanitation, and hygiene education (D-WASHE) committees

2. BACKGROUND

SPLASH is working with the Ministry of Education to create an environment that provides access to sufficient water for the school population and upholds hygiene and sanitation in school settings to ensure the availability of toilets and hand washing facilities and the uptake of needed hygiene practices. The vision for the WASH sector in the Sixth National Development Plan is to have, "A Zambia where all users have access to water and sanitation and utilize them in an efficient and sustainable manner for wealth creation and improved livelihood by 2030."[1] The implementation of the SPLASH project will contribute to the achievement of the Millennium Development Goals (MDGs) and Education for All goals in Zambia.

[1] SPLASH. 2012. WASH in Schools Program Plan.

The strategy of the SPLASH project is to work on WASH facility construction and rehabilitation as well as capacity building at the school and district levels for two to three years. Then, spend two years in each district using a "light touch" with reduced staff and resources to ensure that the systems required for sustainable use and maintenance of facilities are functioning and capable of satisfying the needs of the school population (students and staff).[2]

The five task areas for SPLASH as identified by the USAID program description are as follows:

1. Install and rehabilitate improved drinking water, sanitation, and hygiene infrastructure in schools, using a service delivery framework
2. Improve the hygiene behaviors and health of learners, teachers, and subsequently their communities through innovations and participation
3. Strengthen local governance and coordination of WASH in schools through the involvement of multiple stakeholders
4. Engage those who set policies at the national, provincial, and district levels to support WASH in schools through more effective and efficient policies and practices
5. Strengthen the capacity of small-scale service providers and the private sector to deliver WASH goods and services to both schools and communities on a sustainable basis

2.1 Current Water and Sanitation Situation in Schools in Zambia

A study conducted by the Ministry of Education, Science, Vocational Training and Early Education in 2008 among 44 schools located in both urban and rural areas concluded that only 29 percent and 9 percent of the schools visited met the recommended number of boys and girls per latrine, respectively. That study also concluded that very few students washed their hands regularly even in the presence of hand washing facilities because their families (often) did not have water.

School statistics generated in 2011 were more comprehensive and conclusive. They indicate that out of 31,967 schools in the country, 50 percent met the student/latrine ratio requirements for boys or girls. The same statistics generated for 2012 revealed that the percent had increased to 58 percent. More recent statistics do not provide any information about hand washing facilities and practices.

The current study will help fill that gap and will provide specific quantity and quality data for water sources and sanitation facilities in the target districts.

2.2 Current Completion Rates, Pupil-Teacher Contact Time

Completion rate is a good measure of an education system's performance. However, completion in itself is not sufficient. It is important to ensure that pupils graduate with all the necessary knowledge

[2] SPLASH. 2012. WASH in Schools Program Plan.

needed to be prepared for the future. The quality of education is a priority for the Zambian government. However, many factors contribute to student drop-out rates, including social, economic (financial), cultural, and health-related problems.

Zambia has embarked on reforms to keep children in school such as: enrollment of children at the right official age; child-friendly teaching and learning skills for teachers; flexible learning hours; abolition of corporal punishment and of compulsory school uniforms; wider availability of textbooks; school health measures, such as improved access to water and sanitation facilities in school; and school meals in drought-prone areas.[3]

In terms of primary completion rates in Zambia, the Zambia Millennium Development Goals Progress Report (2011:19) notes that 87.7 percent of girls and 98.7 percent of boys reached grade 7 against the target of 100 percent in 2015. The completion rates for grade 9 and grade 12 in 2009 were 56.9 percent for grade 9 boys and 48.4 percent for grade 9 girls and 22.3 percent for grade 12 boys and 17.4 percent for grade 12 girls.

Furthermore, in 2006, primary school enrollment for school-age girls was at 98 percent and 96 percent for school-age boys.[4] The reason given for the successful enrollment rate was the Free Basic Education Policy that was adopted in 2002 as well as a focus on girl education through the Program for Advancement of Girls' Education.

2.3 Water and Sanitation Policies in Zambia

The Zambian government seeks to ensure the health of its citizens. The goal of the water and sanitation sector is "to achieve 75 percent accessibility to reliable safe water and 60 percent adequate sanitation by 2015 to enhance economic growth and improve the quality of life" (SNDP 2006).

The Zambian government through line ministries and in collaboration with other stakeholders (UNICEF, SNV, DANIDA [Danish Development Assistance], GIZ [German Agency for International Cooperation], and civil society groups) has developed a number of policies and regulations that provide the basis for increasing and improving access to water supply and sanitation to achieve the MDGs and Education for All goals. These include among many others: the Public Health Act (drainage and latrine regulation); the National Rural Water Supply and Sanitation Program (NRWSSP); Ministry of Education infrastructure operation and implementation plans; and School Health and Nutrition Program policies and implementing guidelines.[5]

[3] UNDP. 2011. Zambia Human Development Progress Report. Service Delivery for Sustainable Human Development. Lusaka, Zambia.
[4] UNDP & Ministry of Finance and National Planning (MoFNP). 2011. Zambia Millennium Development Goals Progress Report 2011. Lusaka, Zambia.
[5] SPLASH. 2012. WASH in Schools Program Plan.

According to the 1994 National Water Policy, seven principles govern the state's policy in water and sanitation:

1. Separation of water resources management from water supply and sanitation
2. Separation of regulatory and executive functions
3. Devolution of authority to local authorities and private enterprises
4. Achievement of full cost recovery for water supply and sanitation services in the long run
5. Human resources development leading to more effective institutions
6. The use of technologies more appropriate to local conditions
7. Increased budget spending to the sector

It is notable that the sector has not been performing well due to inadequate implementation of sector plans and strategies, low government funding, unclear institutional responsibilities, weak coordination mechanisms, inadequate baseline information, and insufficient human resources, among other factors hampering service delivery (Zambia Human Development Report 2011).

The Ministry of Local Government and Housing has licensed 11 commercial water utilities to provide water and sanitation services in urban and peri-urban areas whereas those areas not covered by the ministry and local authorities are either served by independent company schemes or by demand-driven community schemes in peri-urban and rural areas. The peri-urban and rural communities are said to receive services from the Department of Water Affairs, D-WASHE, or NGOs, usually with support from international donors.

3. METHODOLOGY

3.1 Study Design and Approach

The methodology adopted in undertaking this baseline combined quantitative and qualitative methods. The mixed approach was adopted for purposes of complementarity, triangulation, and validation of responses. While the greater part was quantitative using a structured questionnaire, the qualitative aspect focused on direct observations of WASH facilities with regard to presence of handing washing facilities and practices, cleanliness of toilet facilities, and other observable phenomena.

The unit of analysis was the school with the head teacher being the main respondent. A total number of 633 primary and basic schools were covered in the study. The study included all functional schools in the districts visited. Thirty-four schools in these districts were part of the full universe of schools in those districts but were not visited because at the time of study they were closed due to floods. Pupils enrolled in those schools had been absorbed by nearby facilities that were still open.

The study was conducted in October 2012 for Chipata, Mambwe, and Lundazi districts, and in July 2013 for Chadiza and Vubwi. Data collection in 2012 was led by RuralNet Associates, which was commissioned as a consultant. A combined team of hired enumerators and Ministry of Education staff collected the data. In 2013, data were collected by Ministry of Education staff under the supervision of SPLASH.

3.2 Methods of Data Collection

The main method of data collection involved the use of a survey using a structured questionnaire on Samsung Galaxy tablets. Direct observations and spot checks were used to observe the pupils' hygiene behavior and practices such as hand washing with soap and cleanliness of sanitation facilities. Data from direct observations, GPS coordinates, and photos of WASH facilities were also captured using the tablets.

3.3 Methods of Data Analysis

Since data were collected using the Samsung Galaxy tablets, it was automatically transmitted and entered into a database for downloading and quality checks.

The data were merged and cleaned before being analyzed. Merging of data was necessary to bring together data collected at two different time periods into one dataset. The data were analyzed using the Statistical Package for Social Sciences and Microsoft Excel. The findings of the observations were analyzed and are presented in descriptive tables and graphs in section 4 of this report.

Data were analyzed using three key parameters: district, school type, and gender.

3.4 Quality Control Measures

Various quality control measures were used at different stages of the study process: at pre-survey, survey, and post-survey. These key quality measures included the following:

3.4.1 Orientation Training of Data Collection Personnel

The Ministry of Education personnel and hired enumerators that were involved in data collection were trained on how to administer the questionnaire and undertake field observation using the Samsung Galaxy tablets. RuralNet Associates pretested the questionnaire for data collection in 2012. No further pretesting of the instrument took place when used in Vubwi and Chadiza.

3.4.2 Supervision of Data Collection

RuralNet Associates supervised data collectors in 2012, and SPLASH personnel supervised them in 2013. The supervisors provided general guidance on data collection and logistics in the field to ensure accurate data were collected. The supervisors also had to check for inconsistencies in responses and any other anomalies before uploading the data. Supervisors also transmitted the checked data to the database managed by RuralNet in Lusaka and the SPLASH office database.

3.4.3 Use of Samsung Galaxy Tablets for Data Collection

The use of the Samsung Galaxy tablets provided additional quality control checks during data collection as well as in the storage of data. This was achieved by programming the questionnaire in a way that minimized error and increased data capture efficiency. The programming of the questionnaire using the ODK Collect software ensured that no questions that required responses were skipped through a command that would not allow a researcher to move to the next question without attending to the previous one. If a question was skipped, a screen prompt would appear indicating an error message.

Upon completing administration of the questionnaire data were stored to allow the supervisor to check and ensure consistency and accurate data capture.

Connecting the Galaxy tablets to the Internet also provided an additional advantage of automatic transmission to the server where it was further checked for accuracy by the data analyst.

3.4.5 Merging and Cleaning the Data Set

Merging and cleaning data collected from different districts at different time periods was performed in order to have a single database for analysis. Consultants undertook data cleaning in Microsoft Excel to align the fields from the two datasets (collected in October 2012 and July 2013) to check for consistency and correct categorization of responses before analysis could be performed.

3.5 Key Challenges and Limitations of the Study

The key challenges and limitations of the study included the following:

- Long distances to some school locations increased travel time and fatigue in the study team
- Poor road infrastructure made it difficult and slowed traveling to some schools
- Lack of inadequate accommodation facilities made one team in Vubwi commute daily from Chipata during data collection
- Internet connectivity was also a problem that led to delays in transmission of data especially in Chadiza and Vubwi districts

4. FINDINGS AND INTERPRETATIONS

4.1 Demographic Characteristics

4.1.1 Type and Number of Schools

The baseline surveyed a total of 633 schools as summarized in Table 1 below. The largest number of schools is government (64 percent), followed by community schools (33 percent), and lastly grant-aided schools (3 percent).

Table 1: Type and Number of Schools

School Type	Number of Schools	%
Community	208	33
Government	406	64
Grant	19	3
Total	**633**	**100**

These schools have grades ranging from grade one to grade nine. See Figure 1 below. However, the majority (47 percent) have grade seven as their highest grade. This indicates that the majority of these schools are primary schools.

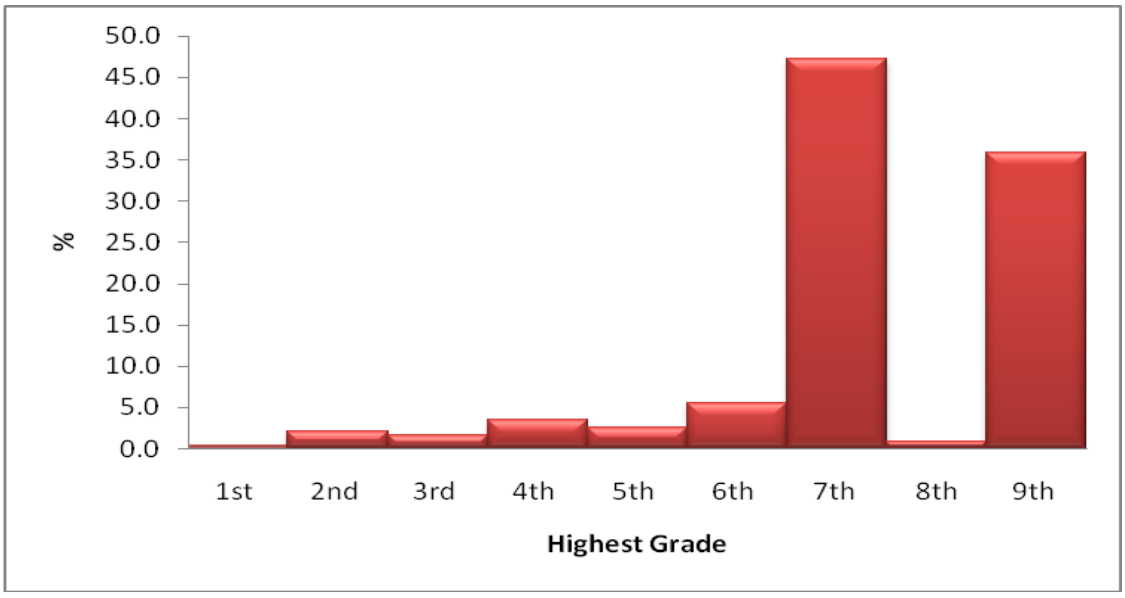


Figure 1: Distribution of Schools by Grade

Figure 1 above also shows that 36 percent of the schools were basic schools providing education up to grade nine.

4.1.2 Enrollment Levels

Enrollment levels in a single school range from 25 to 3,146 pupils. However, data in Table 2 below indicate that the total average enrollment level across all the schools is 401 pupils. Chipata has the highest average school enrollment levels of 479 pupils per school while Lundazi has the lowest average enrollment levels of 328 pupils per school.

Table 2: School Enrolment Levels of Boys and Girls

District	Schools	Girls	% Girls	Boys	% Boys	Total	Average
Chadiza	49	10,243	53	9,233	47	19,476	397
Chipata	255	60,318	49	61,752	51	122,070	479
Lundazi	248	38,491	47	42,773	53	81,264	328
Mambwe	61	10,910	48	11,639	52	22,549	370
Vubwi	20	4,090	50	4,102	50	8,192	410
Total	**633**	**124,052**	**49**	**129,499**	**51**	**253,551**	**401**

The difference in the enrollment levels between boys and girls was found to be minimal ranging from zero to 5 percent in favor of boys. This means that the number of boys enrolled in schools in the five districts is slightly higher than that of girls by an average of 2 percent.

4.1.3 Pupil Absenteeism

Figure 2 indicates that the aggregate level of pupil absenteeism for all the schools was found to be 19.2 percent, 18.5 percent for boys and 19.7 percent for girls. The study further found that absenteeism was higher in Lundazi District, averaging 22.3 percent for boys and 20.9 percent for girls. This was followed by Mambwe District—20.3 percent and 18.5 percent for boys and girls, respectively. The lowest absenteeism levels were observed in Chadiza—13.3 percent for boys and 13.6 percent for girls. Although a similar pattern of pupil absenteeism between boys and girls was observed, boys were more frequently absent than girls by an average of 2 percent.

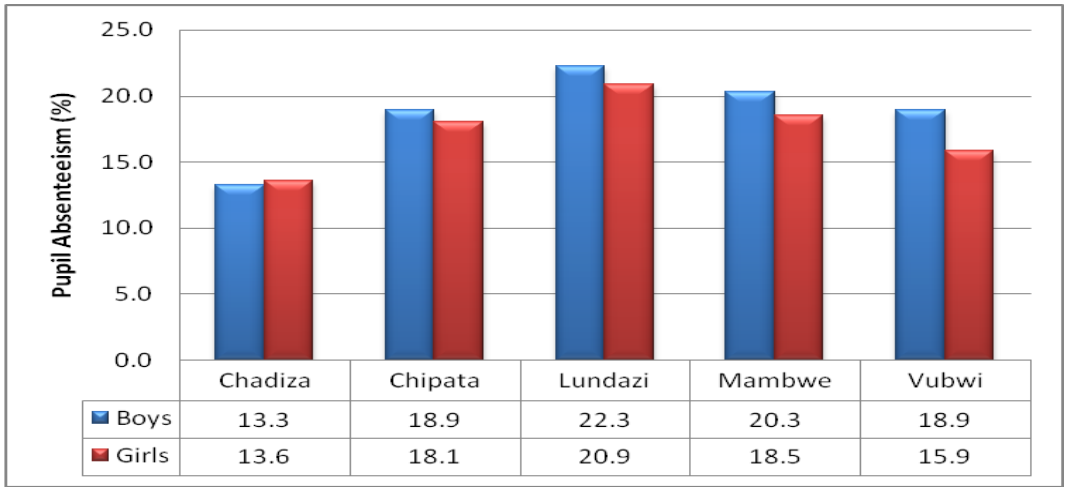


Figure 2: Levels of Pupil Absenteeism

The main reasons for pupil absenteeism offered by school principals were similar regardless of the type of school and gender of pupils. Figure 3 below indicates that the major reasons for girls' absenteeism are household chores (62 percent) and personal illness (10 percent).

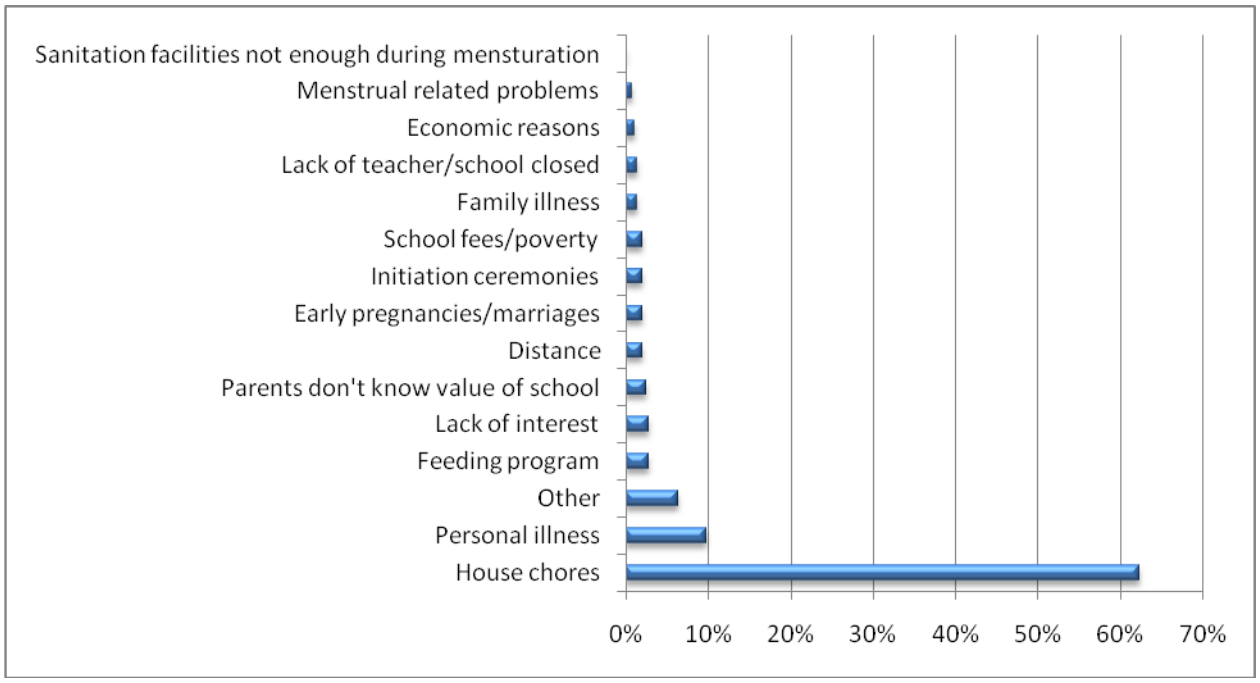


Figure 3: Reasons for Absenteeism among Girls

Similarly, in Figure 4 below the major reasons given for absenteeism among boys are household chores (38 percent) and personal illness (11 percent). Other important reasons given included parents not valuing school and chores related to fishing and cattle herding.

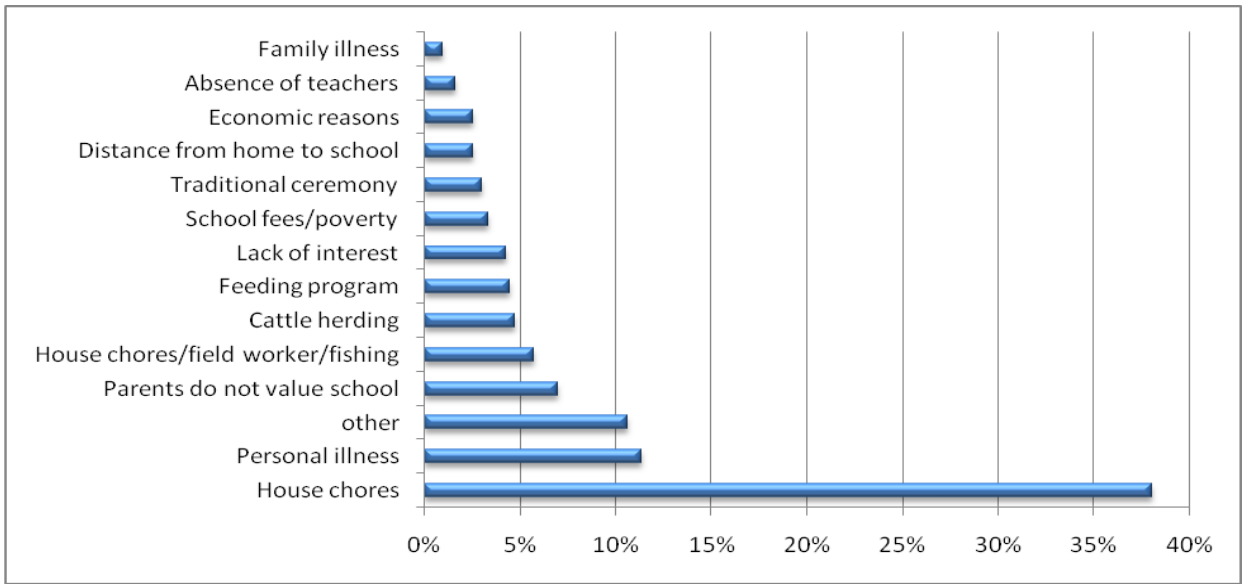


Figure 4: Reasons for Absenteeism by Boys

4.1.4 Drop-Out Rates in Schools

The total drop-out rate indicated in Table 3 was found to be 3 percent for all the schools; Chadiza had the highest rate of 6 percent and Vubwi the lowest at 2 percent.

Table 3: Drop-Out Rates in Schools

District	Boys Dropped Out during the Year	Boy's Enrollment	%	Girls Dropped Out during the Year	Girl's Enrollment	%	Total (%)
Chadiza	1,004	9,233	11	260	10,243	3	6
Chipata	1,495	61,752	2	2,021	60,318	3	3
Lundazi	1,328	42,773	3	1,454	38,491	4	3
Mambwe	344	11,639	3	335	10,910	3	3
Vubwi	93	4,102	2	99	4,090	2	2
Total	**4,264**	**129,499**	**3**	**4,169**	**124,052**	**3**	**3**

Data in Table 3 above also indicate relatively small gender differences in the drop-out rates between boys and girls except for Chadiza where the drop-out rate for boys was 11 percent compared to 3 percent for girls. It is not immediately clear what is behind this huge difference in the drop-out rates between boys and girls in Chadiza. This finding is unusual considering most literature demonstrates higher drop-out rates for girls due to various socio-economic reasons. Therefore, further investigation in Chadiza may be required to understand the underlying reasons for such a huge gender difference in the drop-out rates.

Figure 5 below also indicates that community schools have high drop-out rates of 4.7 percent and 4.9 percent, for boys and girls, respectively, which is above the total average rate of 3.3 percent. Grant schools seem to have the lowest rate of 1.7 percent and 1.8 percent for boys and girls, respectively, which is below the total average indicated.

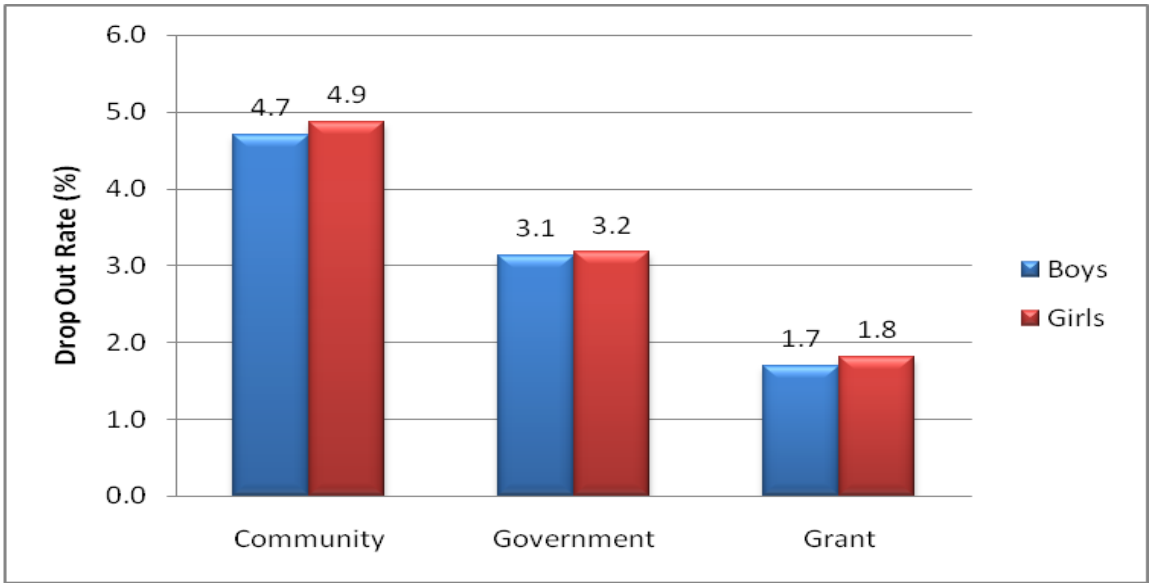


Figure 5: Drop-Out Rates per School Type

The more frequently mentioned reasons for dropping out of school for boys are economic in nature (31 percent) followed by marriage (14 percent). See Figure 6a below.

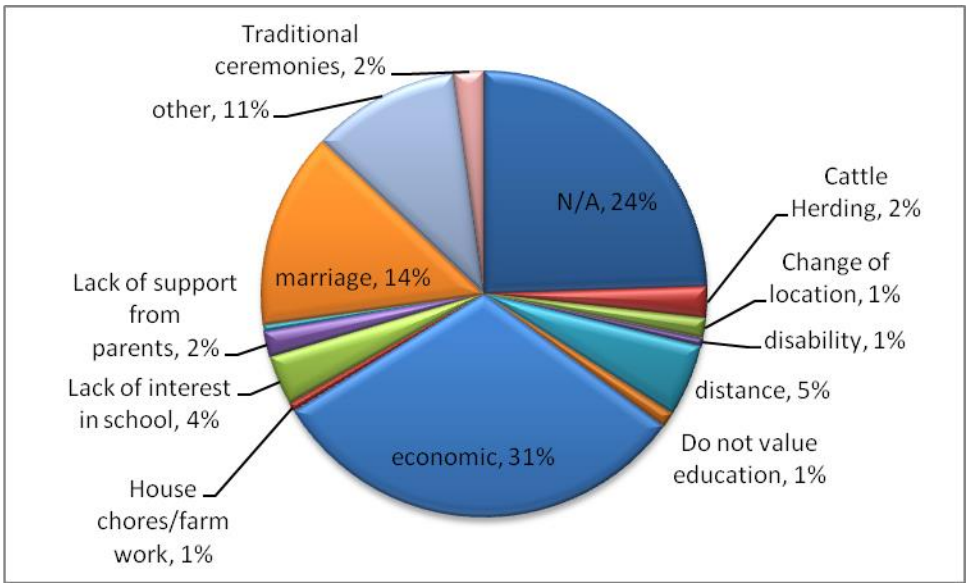


Figure 6a: Reasons for Dropping Out of School Among Boys According to School Principals

However, as presented in Figure 6b, the most frequently mentioned reasons for dropping out of school among girls offered by school principals include marriage (38 percent), pregnancy (24 percent), and economic necessity (11 percent).

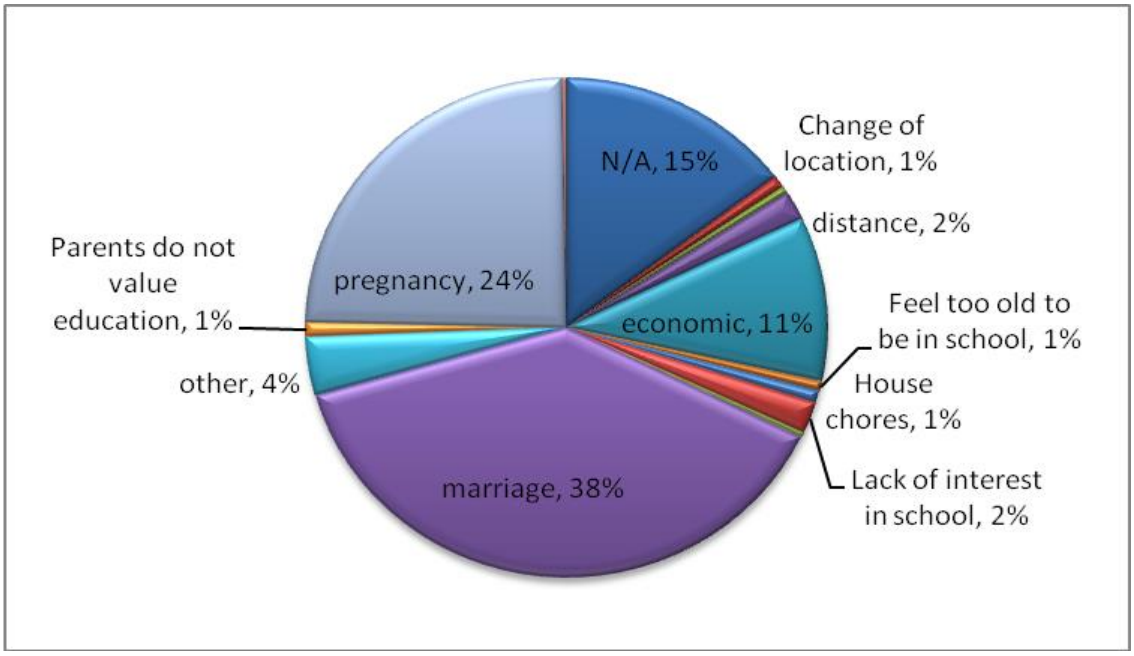


Figure 6b: Reasons for Dropping Out of School Among Girls According to School Principals

4.1.5 Number of Teachers and Teacher Pupil Ratios

Table 4 below shows that there are a total of 3,492 teachers compared to 253,551 pupils enrolled in schools. The teacher-pupil ratio indicates that schools in Chipata have the highest ratio with an average ratio of one teacher per 82 pupils followed by Mambwe, which has one teacher per 76 pupils. The lowest ratio was observed in Chadiza of one teacher per 47 pupils. These high ratios indicate classroom crowding.

Table 4: Teacher-Pupil Ratio per District

District	Total Number of Teachers	Total Enrollment	Teacher-Pupil Ratio
Chadiza	418	19,476	47
Chipata	1,497	122,070	82
Lundazi	1,160	81,264	70
Mambwe	295	22,549	76
Vubwi	122	8,192	67
Total	**3,492**	**253,551**	**73**

Similarly, Table 5 shows average student ratios per teacher by school type. The largest classrooms were observed in government schools where the pupil-teacher ratio is 75/1, followed by grant schools (71/1), and lastly by community schools (64/1).

Table 5: Teacher-Pupil Ratio per School Type

School Type	Total Enrollment	Total Number of Teachers	Ratio
Community	601	38,665	64
Government	2,705	201,738	75
Grant	186	13,148	71
Total	**3,492**	**253,551**	**73**

The high teacher-pupil ratio observed across all the school types may have negative implications for the quality of education. However, the study did not detect any relationship between teacher-pupil ratio and levels of pupil absenteeism as indicated in Figure 7 below. Absenteeism hovers around 20 percent regardless of how crowded classrooms may be.

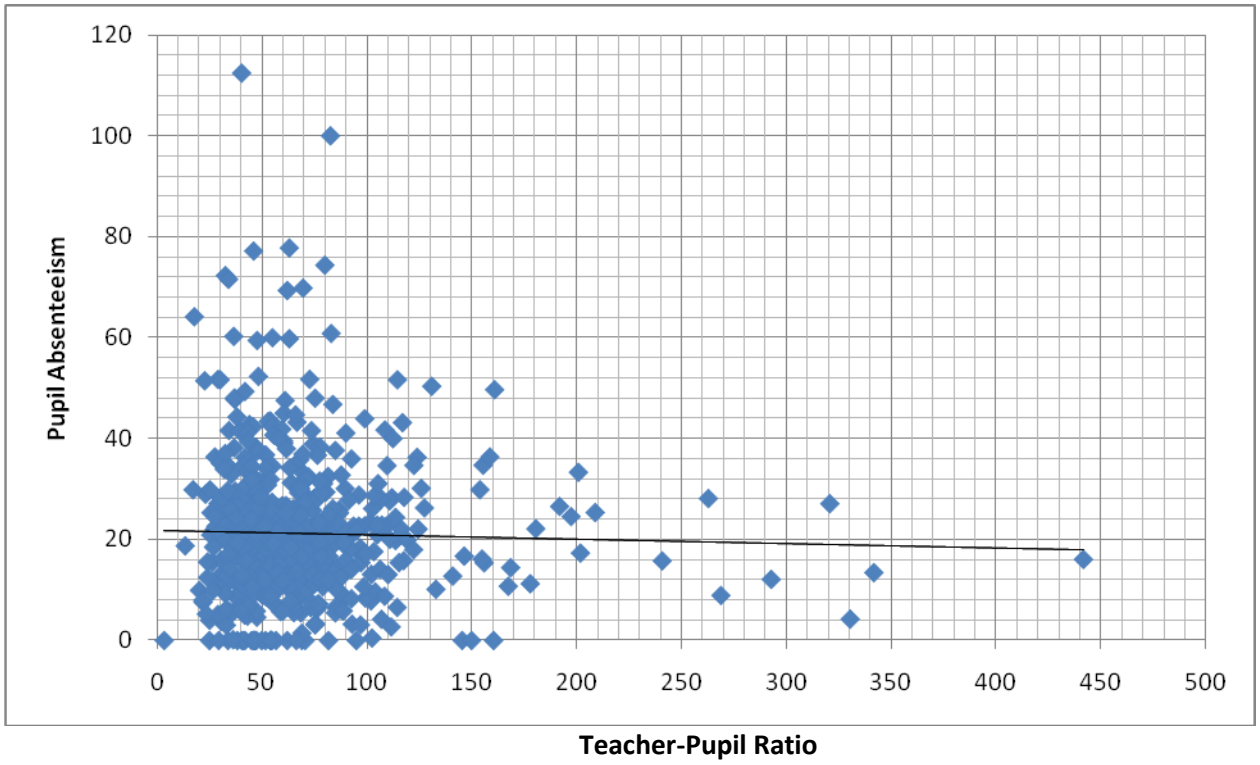


Figure 7: Relationship Between Teacher-Pupil Ratio and Pupil Absenteeism

4.2 Availability of Water Facilities in Schools

4.2.1 Availability of Water Supply

The baseline study established that many schools (71 percent) had water supply points as indicated in Table 6 below. This is irrespective of the functionality or the type of water point present.

However, 29 percent of schools without water supply points are still very high, affecting more than 73,844 pupils.

Table 6: Availability of Water Supply Point

	NO		YES			
District	**Frequency**	%	**Frequency**	%	**Total**	%
Chadiza	10	20	39	80	49	100
Chipata	66	26	189	74	255	100
Lundazi	84	34	164	66	248	100
Mambwe	21	34	40	66	61	100
Vubwi	5	25	15	75	20	100
Total	**186**	**29**	**447**	**71**	**633**	**100**

The district with the highest school water coverage is Chadiza where 80 percent of the schools reported having a water point. The lowest coverage was observed in both Mambwe and Lundazi where 66 percent of the schools indicated having water supply.

The most typical water source available is a borehole fitted with a water pump. This was indicated by 83 percent of the schools with access to water. The second most frequent technology detected was a protected well, but this was only found in 7 percent of the served schools. See Table 7 below.

Table 7: Type of Water Supply Point Available

Type of Water Point	**Frequency**	%
Borehole with pump	371	83
Protected well	33	7
Unprotected well	23	5
Piped water	13	3
Borehole piped	7	2
Total	**447**	**100**

Other water supply points available included piped water and boreholes with pipes. Very few schools (5 percent) were found to have unprotected wells.

However, storing water remains a challenge as 67 percent of the schools had no facility to do so. The baseline observed that only 33 percent of the schools had water storage facilities. These facilities were seen in 47 percent of the grant schools, representing the highest frequency. Only 21 percent of community schools had these facilities.

Table 8 below also indicates that there is a further challenge regarding water treatment. The majority of schools (88 percent) do not treat the water, a situation that raises health concerns. The study

observed that the absence of water treatment was more common in community schools (91 percent) and less common in grant schools (79 percent), which is still a relatively high percentage.

Table 8: Treatment of Drinking Water

	Community		Government		Grant		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
No	190	91	355	87	15	79	560	88
Yes	18	9	51	13	4	21	73	12
Total	**208**	**100**	**406**	**100**	**19**	**100**	**633**	**100**

The most commonly mentioned obstacle to water treatment is financial; only 13 percent of the schools are able to pay for treatment of water regardless of the funding source—a school budget allocation; a government allocation; or contributions from the community, NGOs, and other sources. This situation points to the need for more workable and sustainable ways of treating water in these schools. The most commonly used water treatment method is chlorination (10.9 percent). See Table 9 below.

Table 9: Common Water Treatment Methods

Treatment Type	Frequency	%
Chlorinating	69	10.9
Boiling	2	0.3
Other	2	0.3
N/A	560	88.5
Total	**633**	**100**

Only 0.3 percent of the schools indicated that they boiled or used other water treatment methods. Other methods used, though not commonly practiced, include covering and placing water under the sun to warm it.

Figure 8 below indicates that the major source of funding for water treatment (chlorination) is the school budget (33 percent) followed by Ministry of Health funding (25 percent) of the schools.

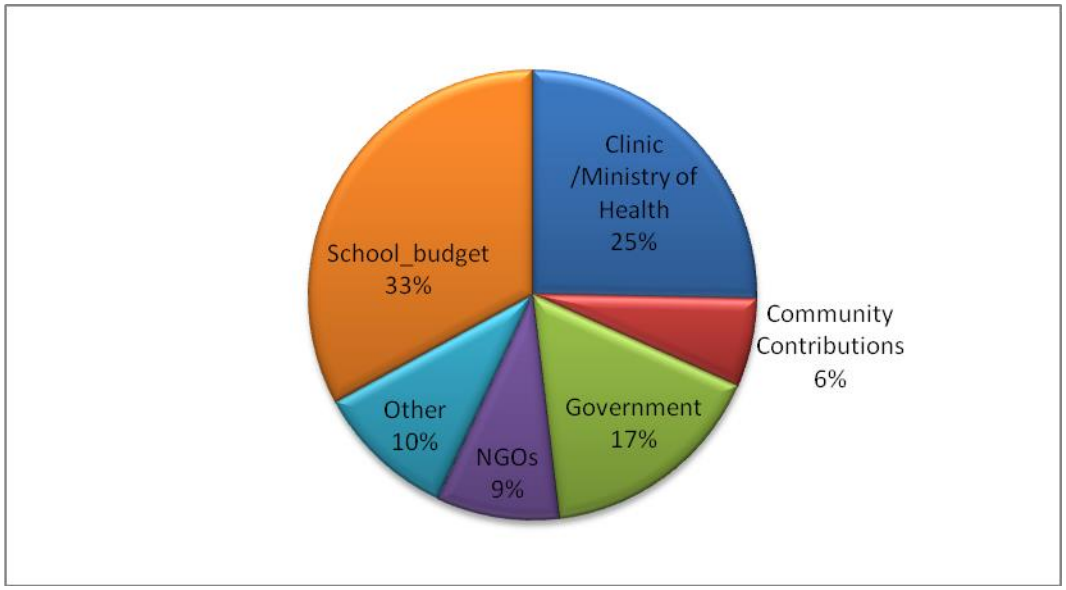


Figure 8: Source of Funding for Water Treatment

Support from government and NGOs constitute 17 percent and 9 percent, respectively. Very little (6 percent) contribution comes from the community.

4.2.2 Status, Functionality and Maintenance of School Water Facilities

Table 10 below shows that 39 percent of schools indicated the need for immediate repairs to their water points. The highest proportion was observed in Chadiza and Vubwi where 51 percent and 50 percent of the schools expressed this need, respectively.

Table 10: Proportion of Schools Requiring Immediate Repairs to their Water Facilities

	N/A		NO		YES	
District	**Frequency**	%	**Frequency**	%	**Frequency**	%
Chadiza	10	20	14	29	25	51
Chipata	0	0	143	56	112	44
Lundazi	0	0	165	67	83	33
Mambwe	0	0	41	67	20	33
Vubwi	5	25	5	25	10	50
Total	**15**	**22**	**368**	**58**	**250**	**39**

The lowest proportion of schools requiring such repairs was observed in Mambwe and Lundazi where 33 percent of the schools in each district reported such a need. These figures indicate a relatively high number of dysfunctional and/or poorly functioning water facilities in the schools.

Table 11: Proportion of School Types Requiring Immediate Repairs to Water Facilities

	N/A		NO		YES	
School Type	**Frequency**	%	**Frequency**	%	**Frequency**	%
Community	4	2	177	85	27	13
Government	11	3	179	44	216	53
Grant	0	0	12	63	7	37
Total	**15**	**2**	**368**	**58**	**250**	**39**

The schools where immediate water facility repairs are needed are mainly government schools (53 percent) as indicated in Table 11 above. Thirty-seven percent of grant schools had similar problems. However, the situation for community schools was found to be different since most of the schools (85 percent) have functional water facilities and, therefore, do not require immediate repairs.

In terms of the specific repairs required Figure 9 below shows that 14 percent of the schools need to repair their water pump; 7 percent need to replace water pipes; about 5 percent require repairing well casing; about 3 percent require repair of an apron; and lastly less than 2 percent require repairing the well cover. However, the largest percent of schools (17 percent) require other repairs that were not specified. All these repairs outlined above are related to water supply and not toilet facilities.

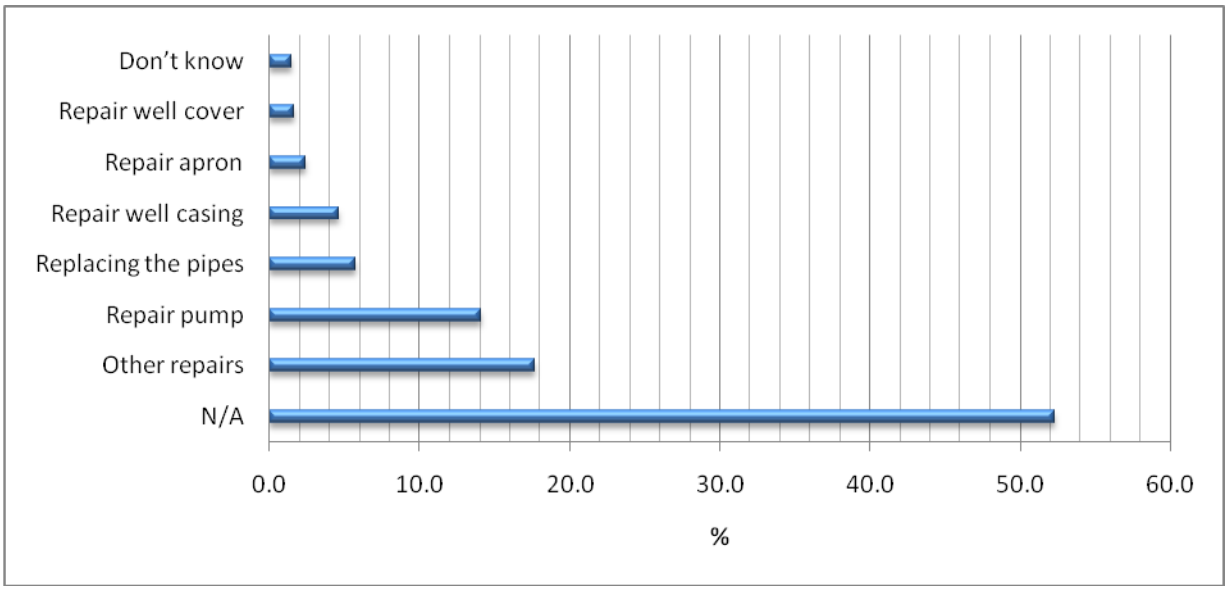


Figure 9: Water Facility Repairs Required by Schools

The baseline survey also found that the responsibility for repair of these water facilities rests with other people (28.5 percent); PTA members (26.5 percent); school workers (8 percent); and APM (5 percent). Pupils do not tend to be involved in the repairs. Only 4 percent of schools use pupils to repair water facilities. See Figure 10 below.

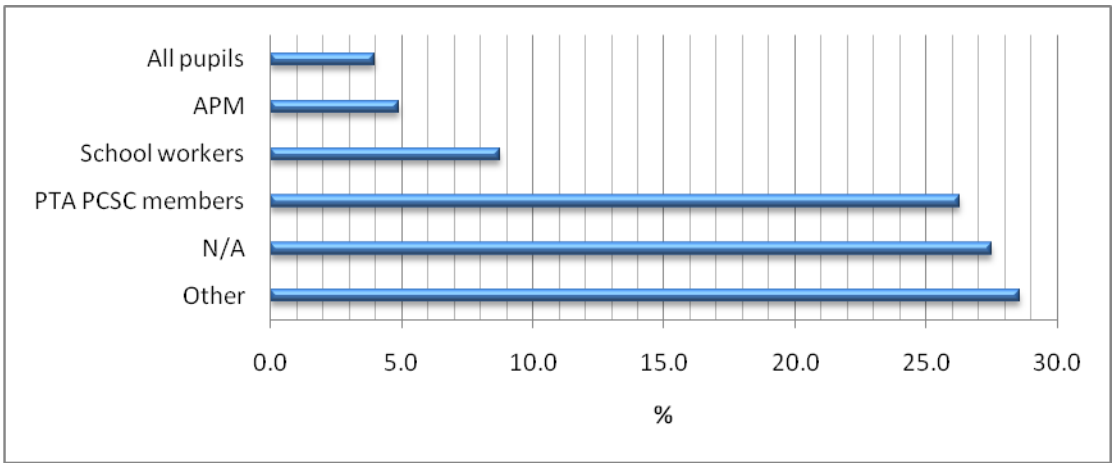


Figure 10: Responsibility for Repairing School Water Facilities

Although a relatively high number of schools require that their water facilities be repaired, only 17 percent have the requisite funds, 55 percent of them do not. See Table 12 below. Furthermore, only 25 percent of the schools with operations and maintenance (O&M) funds had accompanying repair plans, while the majority (75 percent) did not have any. This means that despite many schools putting in place plans for repairs they are not able to finance their plans.

Table 12: Availability of O&M Funds for Water Facilities and Presence of Repair Plans

	Presence of a repair plan			
Availability of O&M funds for water facilities	**N/A (%)**	**No (%)**	**Yes (%)**	**Total (%)**
N/A	46	46	0	28
No	39	39	75	55
Yes	14	14	25	17
Total	**100**	**100**	**100**	**100**

N=633

4.2.3 Access of School Water Facilities by Surrounding Communities

The baseline also sought to capture the level of school and community linkage and whether surrounding communities benefit from school water facilities. Findings in Table 13 indicate that many schools (65 percent) share their water facilities with surrounding communities. Only a few (8 percent) do not share with surrounding communities.

Table 13: Proportion of Schools Sharing Water Facilities with Surrounding Communities

	N/A		NO		YES	
District	**Frequency**	%	**Frequency**	%	**Frequency**	%
Chadiza	0	0	9	18	40	82
Chipata	66	26	28	11	161	63

Lundazi	84	34	10	4	154	62
Mambwe	21	34	3	5	37	62
Vubwi	0	0	3	15	17	85
Total	**171**	**27**	**53**	**8**	**391**	**65**

n=633

The highest percentage of schools sharing their water facilities was observed in Vubwi and Chadiza where 85 percent and 82 percent of the schools share their facilities with surrounding communities, respectively. The lowest percent (62 percent) was observed in both Mambwe and Lundazi.

The baseline study also establishes in Figure 11 below that the average number of people accessing water facilities is very high for grant schools (468) compared to government and community schools 321 and 65, respectively. The survey, further found that more than half of the schools support a number of villages ranging from one to five with water facilities.

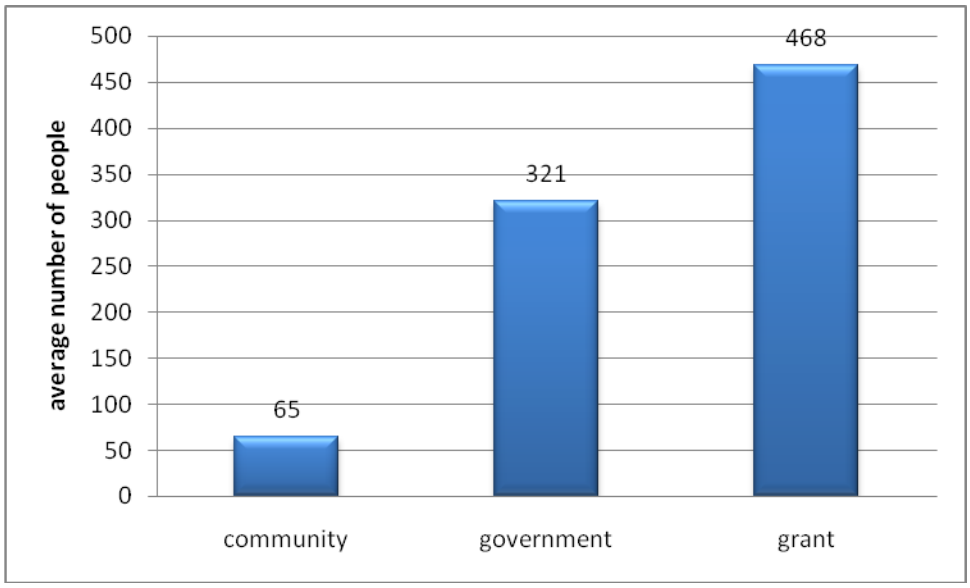


Figure 11: Average Number of People Accessing School Water Facilities

The high number of people accessing water facilities in grant schools raises concerns of congestion, maintenance, and quality of these facilities. In addition, the linkage of schools and communities with regard to access and use of water facilities implies that improving water and sanitation in schools could go a long way in improving the general water, sanitation, and health of the greater rural communities. Secondly, this strong linkage also suggests that beneficiary communities have to play a greater role in supporting O&M of school water facilities to improve the conditions detected at the baseline.

4.2.4 Availability of Toilet Facilities

The majority (92 percent) of the schools surveyed indicated that they have toilet facilities. See Table 14 below. Only 8 percent do not. However, there are disparities in the distribution of toilets facilities across the different types of schools. While all the grant schools and 98 percent of government schools have toilet facilities, a relatively high percent (20 percent) of community schools did not have toilet facilities. This raises serious concerns about the sanitation situation in community schools.

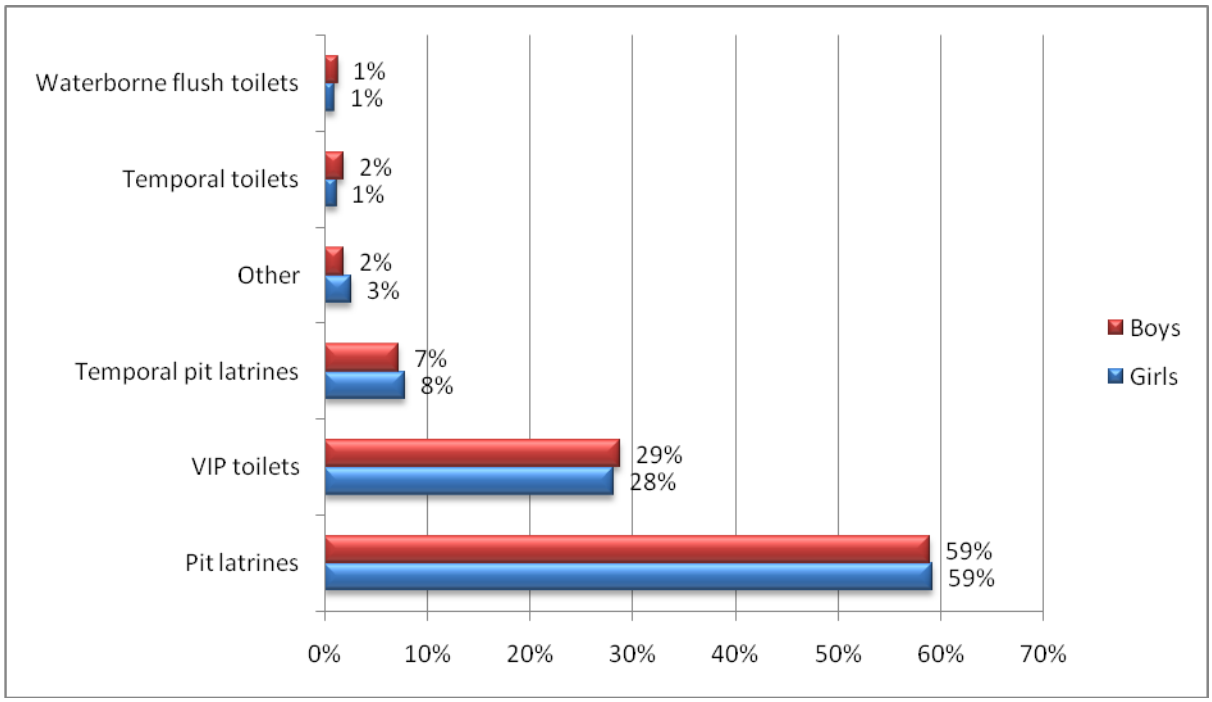
Table 14: Availability of Toilet Facilities in Schools

	NO		YES		Total	
School Type	**Frequency**	%	**Frequency**	%	**Frequency**	%
Community	41	20	167	80	208	100
Government	8	2	398	98	406	100
Grant	0	0	19	100	19	100
Total	**49**	**8**	**584**	**92**	**633**	**100**

Additionally, many schools (62 percent) had separate toilets for teachers while 30 percent of the schools did not have separate toilet facilities for teachers.

Further analysis indicates that most of the schools (more than 82 percent) have toilet facilities that are exclusively used by girls and boys, respectively. However, only 2 percent and 7.4 percent of the schools had doors and urinals in the boys' toilets, respectively. Despite making headway in providing separate toilet facilities for boys and girls, more needs to be done to improve privacy by ensuring that toilet facilities everywhere have secure doors.

Figure 12 below shows that pit latrines are the most common type of toilets available to both girls and boys. This was indicated by 59 percent of the schools. The next common toilet type is the ventilated improved pit toilet in 28 percent and 29 percent of the schools, used by girls and boys, respectively.



n=611 (Girls); n=539 (Boys)

Figure 12: Type of Toilet Facilities Available to Girls and Boys

Furthermore, the distribution of toilet facilities between girls and boys seem to follow a similar pattern across the schools. Where there are more toilets for girls there was an observed corresponding high number of toilets for boys, which to a greater extent indicates gender equality.

4.2.5 Availability of Hand Washing Facilities

In addition to water and toilets, few schools (31 percent) have hand washing facilities. See Table 15 below. The highest percentage of schools with hand washing facilities was observed in Vubwi (65 percent) followed by Chadiza and Mambwe with 49 percent each, while Lundazi had the lowest percent (23 percent). In terms of type of school, community schools were found to be in a worse situation since only 12 percent of community schools had hand washing facilities compared to government and grant schools whose percentages were 40 percent and 58 percent, respectively.

Table 15: Availability of Hand Washing Facilities

	NO		YES		Total
District Name	Frequency	%	Frequency	%	Frequency
Chadiza	25	51	24	49	49
Chipata	181	71	74	29	255
Lundazi	191	77	57	23	248
Mambwe	31	51	30	49	61
Vubwi	7	35	13	65	20

Total	435	69	198	31	633

The common hand washing facilities available include plastic basins on stands reported by 41 percent of the schools that have hand washing facilities followed by open containers at 23 percent. Other hand washing facilities available include permanent blocks and buckets with taps. However, these were indicated by few schools with a combined figure of 13 percent.

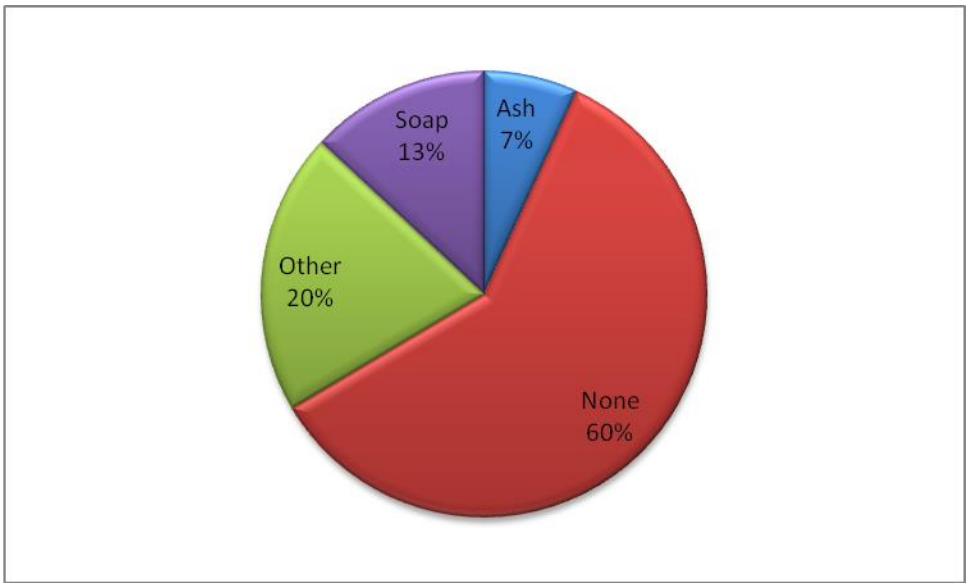
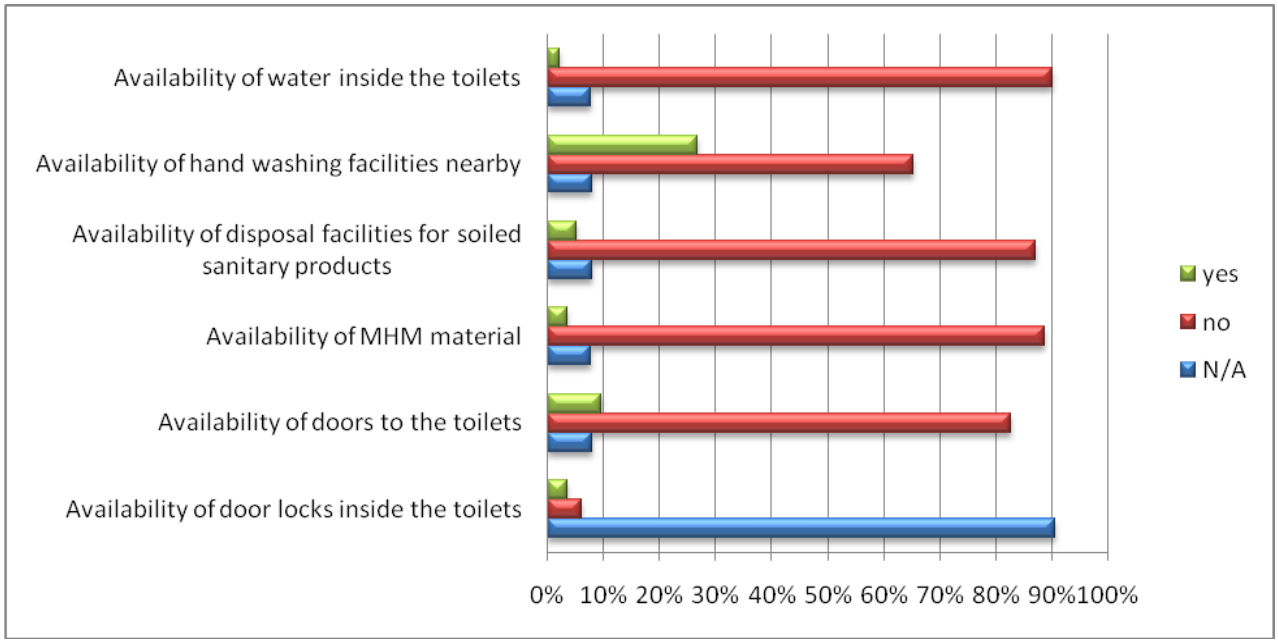


Figure 13: Material Used for Hand Washing

In addition, many schools that have hand washing facilities are faced with the challenge of not having soap. Only 6 percent of the schools had soap available at hand washing facilities. The baseline also found that in the absence of soap, a number of schools (60 percent) use nothing but water and seven 7 percent indicated that they use ash (Figure 13 above). Furthermore, out of the schools that can afford to buy soap, 5 percent receive government grants, 3.1 percent use PTA or parent-community school committee contributions, and another 3.1 percent use funds from the school administration.

4.2.6 Availability of Menstrual Hygiene Management Facilities for Girls

Figure 14 below indicates serious inadequacies in the availability of special WASH facilities for girls in many schools. The results presented in Figure 14 show that only 3 percent of schools had menstrual hygiene material, 2.2 percent had clean water inside the toilets, 27 percent had hand washing facilities nearby, 5 percent had disposal facilities for soiled sanitary material, 9 percent and 3 percent had doors and door locks for safety and privacy purposes, respectively.



n=633

Figure 14: Availability of Menstrual Hygiene Management Facilities for Girls

The study further established that only 1.4 percent of the schools provide sanitary pads as MHM material. This represents 41 percent of schools that provide MHM material. Less than 1 percent of the schools provide water for washing cloths and other material such as cotton wool, tissue, and paper. Many schools lag behind in terms of meeting the special needs of girls and achieving gender equity in accessing and benefiting from water and sanitation facilities.

4.2.7 Adequacy of School Toilet Facilities

The baseline study found that despite many schools having toilet facilities, these are not adequate to cater to the number of enrolled pupils. Several studies demonstrate the high school enrollments in Zambian basic schools in the recent past due to the free primary education policy and the consequent shortage of toilet facilities (Shantuka 2009; Global Campaign on Education 2005).

Table 16 below demonstrates the serious inadequacy of toilet facilities for both boys and girls. The situation for girls seems to be much worse compared to boys based on the drop hole ratio requirement for safe and adequate access to sanitation. It is clear from the data in the table that the overall drop hole ratio for girls is 181 percent above the recommended limit of one drop hole per 25 girls. Similarly, the overall drop hole ratio for boys is 92 percent higher than the recommended ratio of one drop hole per 40 boys. These ratios seem to be slightly lower than what SPLASH (2012) found in other districts in Eastern Province—one drop hole per 214 girls and one drop hole per 237 boys. The highest ratio recorded for both boys and girls was observed in Mambwe where one drop hole is used by 88 girls and one drop hole per 98 boys. The lowest ratio was observed in Vubwi with one drop hole to 70 girls and one drop hole to 50 boys. Although the inadequate toilet facilities affects all types of schools, community schools seem to have the biggest challenge for both boys and

girls with pupil-drop hole ratios of 82 and 77, respectively. This situation points to the need for more toilet facility construction by affected schools to meet the statutory requirement or recommended pupil-drop hole ratio.

Table 16: Percent Deviation of Pupil-Drop Hole Ratio from the Recommended Ratio

District	Boys Ratio	Recomm-ended	% deviation	Girls Ratio	Recomm-ended	% deviation
Chadiza	55	40	37	56	25	124
Chipata	90	40	125	83	25	234
Lundazi	68	40	71	60	25	139
Mambwe	98	40	145	88	25	252
Vubwi	50	40	25	44	25	76
Total	**77**	**40**	**92**	**70**	**25**	**181**

Table 16 above also shows gender constraints in that the girls are more affected by the inadequate toilet facilities compared to boys. This is across all types of schools.

4.2.8 Maintenance and Cleanliness of Toilet Facilities

The baseline study found that toilet facilities in many schools (87 percent) are cleaned by pupils who take turns doing so. Very few schools (2 percent) employ workers to clean the toilets. See Table 17 below.

Table 17: Responsibility for Cleaning the School Toilets

Response	Frequency	%
Pupils take turns	553	87
Other	20	3
School workers	11	2
N/A	49	8
Total	**633**	**100**

Field observations in Table 18 below indicate that most of the schools had somewhat clean toilet facilities. This pattern was the same for teachers', girls', and boys' toilet facilities observed in 32 percent, 47 percent, and 48 percent of the schools. However, a higher number of schools (23 percent) had clean teachers' toilets compared to 13 percent and 12 percent of schools that had clean toilets for girls and boys, respectively.

Table 18: Observed Cleanliness of Toilet Facilities

Observed Cleanliness of Toilet Facilities	Teachers	Boys	Girls
Clean	23	13	12
Somewhat clean	32	47	48
Not clean	18	33	33
N/A	27	7	7
Total	**100**	**100**	**100**

n=633

4.3 Access of WASH Facilities by Disabled People

The baseline also attempted to establish accessibility of WASH facilities by people with disabilities. The results of the survey show that most of the schools (78 percent) do not have disability-friendly sanitation facilities. See Table 19 below. Only 15 percent indicated that they have disability-friendly sanitation facilities.

Table 19: Percent of Sanitation Facilities that are Disability-Friendly

	N/A		NO		YES	
School Type	**Frequency**	%	**Frequency**	%	**Frequency**	%
Community	41	20	146	70	21	10
Government	8	2	327	81	71	17
Grant	0	0	18	95	1	5
Total	**49**	**8**	**491**	**78**	**93**	**15**

Out of the schools that have disability-friendly sanitation facilities, government schools seem to have the highest proportion (17 percent) of these facilities followed by community schools (10 percent). Grant schools are at the bottom with only 5 percent indicating availability of such facilities.

In assessing accessibility of sanitation facilities by disabled pupils, the location of the facilities is critical. The baseline found that most of the schools (62 percent) have sanitation facilities located within a safe and convenient distance of approximately 100 m from the classrooms and water points as indicated in Table 20 below.

Table 20: Percent of Sanitation Facilities Located Around100 m from Classrooms and Water Points

Response	Frequency	%
No	188	30
Yes	393	62
N/A	52	8
Total	**633**	**100**

However, a relatively high number of schools (30 percent) do not have conveniently located sanitation facilities. Further analysis of location of sanitation facilities indicated that most hand washing facilities are near the toilets. This was observed in 65 percent of the schools that had hand washing facilities. See Figure 15 below. The other common location for hand washing facilities is near the classrooms. This was observed in 24 percent of the schools with hand washing facilities. Two percent of schools indicated having hand washing facilities in other locations, such as near the feeding place.

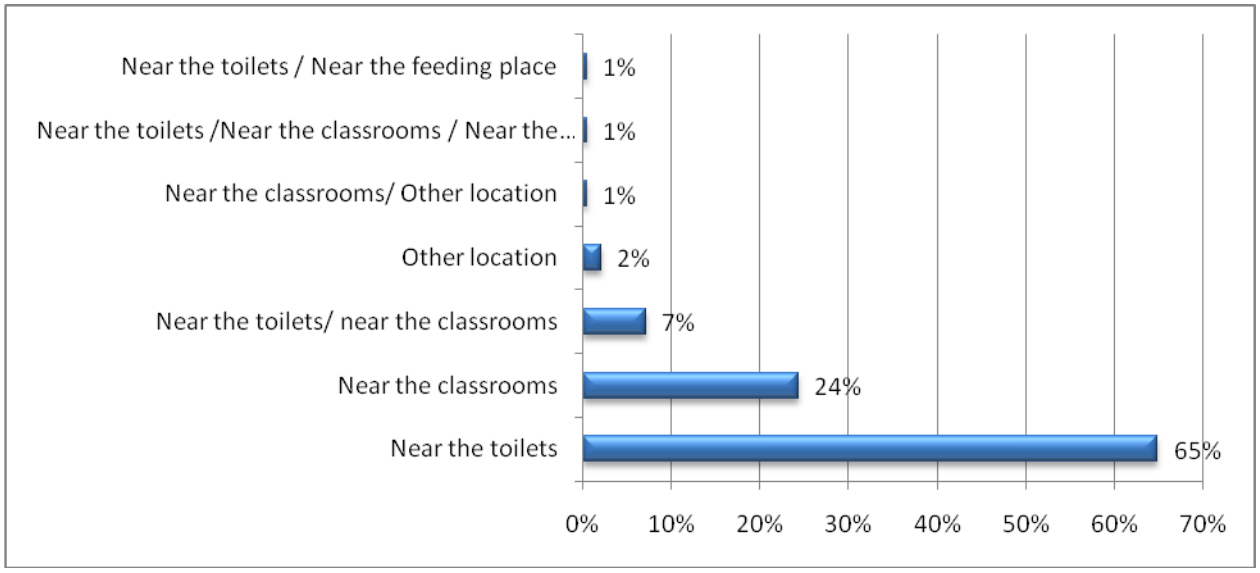


Figure 15: Location of Hand Washing Facilities

In the absence of data on the number of WASH facilities that are disability-friendly, it was not possible to assess the extent to which the schools provide equitable access to WASH facilities for people or pupils with disabilities. This data could be collected in future baselines to enable such assessment. Nevertheless, the statistics shown above indicate that particular attention be paid to the needs of people living with disabilities in terms of design and provision of facilities to achieve equitable access to water and sanitation facilities in schools.

4.4 Hygiene Promotion in Schools and Communities

The study found that teachers and pupils engage in hygiene promotion that targets both pupils and surrounding communities. However, Table 21 below shows that very few of the schools visited (23 percent) have teachers trained in hygiene promotion. Further analysis indicated that the teachers trained in hygiene promotion were mostly from government schools (30 percent), while only 26 percent and 9 percent of grant and community schools, respectively, had trained teachers.

Table 21: Teachers Trained in Hygiene Promotion

	Presence of Teachers that Have Been Trained in Hygiene Promotion					
School Type	**No**	%	**Yes**	%	**Total**	%
Community	190	91	18	9	208	100
Government	283	70	123	30	406	100
Grant	14	74	5	26	19	100
Total	**487**	**77**	**146**	**23**	**633**	**100**

The reason for the difference in the number of teachers trained in hygiene promotion found in government schools compared to other schools could not be clearly established from the data collected. It probably could be attributed to formal training received by teachers in government schools. Another reason could be that government schools were beneficiaries of hygiene training from different projects. However, this requires verification.

The baseline also established that some schools have organized WASH groups for pupils. However, this was only observed in a few schools (22 percent). See Table 22. Similarly, organized WASH groups were found in more government schools than in other types of schools. The cross tabulation in Table 22 also shows that teachers trained in hygiene promotion seem to have some influence on the presence of organized WASH groups for pupils.

Table 22: Teachers Trained in Hygiene Promotion and Presence of Organized WASH Groups

	Presence of Teachers that Have Been Trained in Hygiene Promotion					
Presence of organized WASH group for pupils	**No**	%	**Yes**	%	**Total**	%
No	421	86	73	50	494	78
Yes	66	14	73	50	139	22
Total	**487**	**100**	**146**	**100**	**633**	**100**

Hygiene promotion in schools and surrounding communities was found to be aided by various learning materials. Data in Table 23 show that only 2 percent of the schools had WASH learning material. This was indicated by 21 percent, 19 percent, and 2 percent of grant, government, and community schools, respectively.

Table 23: Availability of WASH-Related Learning Materials in Schools

	Availability of school WASH related learning material					
School Type	**No**	%	**Yes**	%	**Total**	%
Community	203	98	5	2	208	100
Government	327	81	79	19	406	100
Grant	15	79	4	21	19	100
Total	**203**	**98**	**5**	**2**	**208**	**100**

Figure 16 below shows that many schools (43 percent) had no WASH promotion activities in the last six months. However, in the schools where hygiene promotion took place, the common activities carried out included cleaning latrines. This was indicated by 22 percent of the schools. This was followed by drama performance and other WASH activities, which were indicated by 9 percent and 15 percent of the schools, respectively.

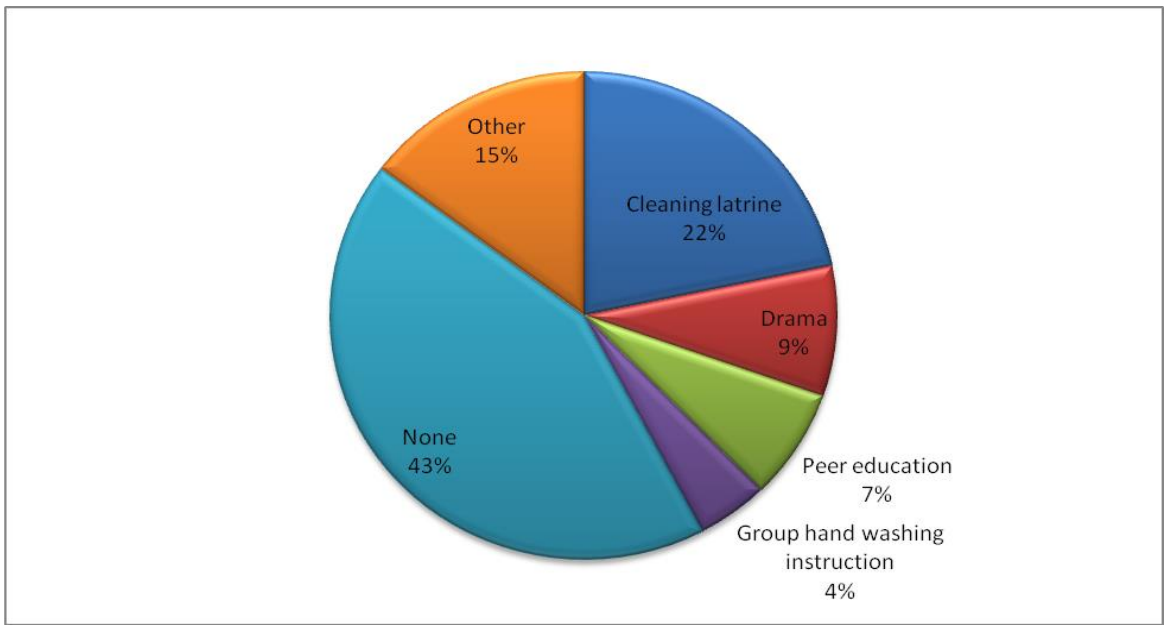


Figure 16: WASH Activities Commonly Practiced in Schools

Furthermore, Figure 16 above shows that peer education and hand washing demonstrations were only indicated in 7 percent and 4 percent of the schools, respectively.

The statistics above indicate the need for SPLASH to prioritize its targeting of community and grant schools with regard to teacher training in hygiene promotion, formation of organized pupil WASH groups, and provision of hygiene learning material. In addition, increased promotion of peer education and hand washing is needed in these schools to improve hygiene practices and behaviors. This promotion could also be extended to surrounding communities to ensure holistic and more sustainable results.

4.5 Hygiene Behavior and Practices in Schools

Analysis of sanitation and hygiene behavior in schools indicates a relatively high percentage of community schools (13 percent) still using nearby bushes to defecate and/or urinate. The statistic is low for government schools. Only 1 percent indicated that pupils use the nearby bush to defecate and/or urinate. This behavior was found to be absent in grant schools. Other places pupils use for urinating and defecation include neighboring villages, toilets at home, and toilets at church, all of which constitute less than 6 percent.

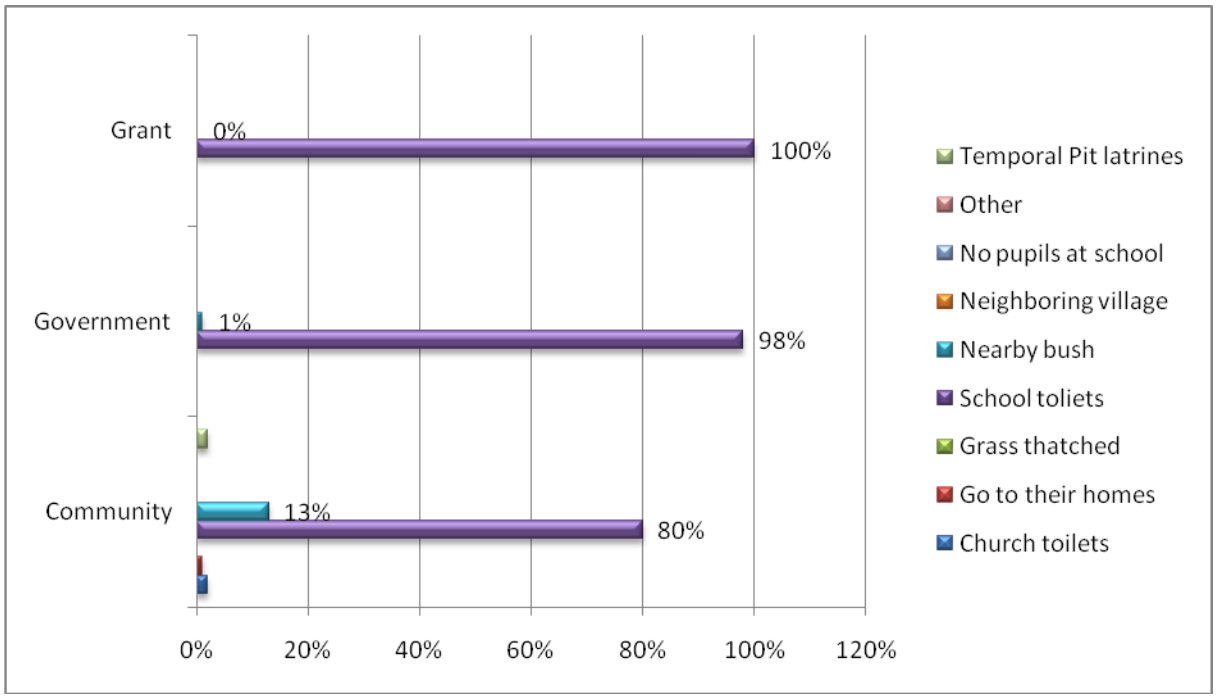


Figure 17: Sanitation and Hygiene Behavior in Schools

The relatively high use of the nearby bushes for defecation and urination by pupils is not a healthy situation for community schools as it indicates poor sanitation and hygiene behavior or practice. This behavior is reinforced by the inadequate availability of toilet facilities in many community schools. This point could be supported by the observed widespread use of various alternative toilet facilities by pupils in community schools, which includes church toilets, temporal pit latrines, grass thatched latrines, and going home as indicated in Figure 17 above. The relatively low use of the nearby bush by pupils in government schools could be attributed to the WASH promotion activities conducted in many of these schools. However, grant schools may attribute pupils' refusal to use nearby bushes as an indication that adequate toilet facilities are in place rather than an active hygiene promotion program because the latter is not common in these schools.

The baseline also found that pupils practice group hand washing especially in schools with hand washing facilities. Group hand washing was found in 24 percent of the schools that had hand washing facilities. Table 24 below also shows that schools using plastic basins on stands and/or open containers for hand washing had the highest proportion of pupils practicing group hand washing (19

percent). Schools using buckets with taps, other options, or that have a permanent block also registered some practitioners of group hand washing.

Table 24: Presence of Hand Washing Facilities and/or Observed Hand Washing

	Practice Group Hand Washing		
	NO	YES	TOTAL
Type of hand washing facility	%	%	%
Buckets with taps	6	1	7
Open containers	17	5	22
Other	18	4	22
Permanent block	5	1	6
Permanent block and open containers	1	0	1
Permanent block and other	1	0	1
Plastic basin on stands	28	13	41
Plastic basins on stands and open containers	1	1	1
Plastic basins on stands and other	1	0	1
Total	**76**	**24**	**100**

n=197

Figure 18 below shows that very few schools—11 percent and 10 percent of grant and government schools, respectively—practice group hand washing. The situation is worse in community schools where only 2 percent have pupils practicing group hand washing.

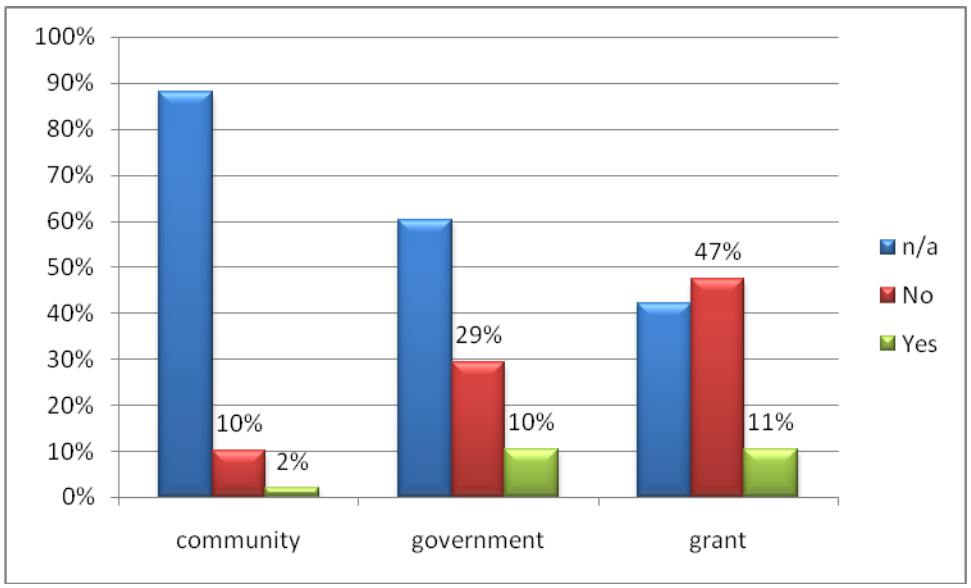


Figure 18: Proportion of Schools Practicing Group Hand Washing

It is also worth noting in Figure 18 that despite government schools having WASH groups and teachers trained in hygiene promotion, the levels of group hand washing is at 10 percent, which was not significantly different from that of grant schools, which are behind with regard to presence of organized WASH groups and teachers trained in hygiene promotion.

5. CONCLUSION

The majority of primary and basic schools surveyed in this baseline study was government followed by community and lastly grant schools. A total of 253,551 pupils are enrolled in these schools with a total number of 3,492 teachers employed. The baseline found that most of these schools have a high teacher-pupil ratio indicating a serious shortage of teachers and as well as high enrollment levels. This situation poses serious implications for the quality of education and educational performance by pupils in these districts.

The study observed that absenteeism and dropouts were a common feature across all categories of schools affecting both boys and girls even though boys seem to be more affected than girls. The study did not find major differences in the reasons for absenteeism and dropout between boys and girls, which included house chores and personal illness, and economic reasons for both gender groups with marriage and pregnancy being other important reasons for girls. However, no reasons for school absenteeism and dropouts were related to water and sanitation.

Based on the baseline results it can be concluded that the water and sanitation situation of many primary and basic schools in the project area is poor. This conclusion is consistent with the findings of UNICEF indicating that more than 25 percent of basic schools in Zambia do not have access to safe water supply and sanitation. This is because most of the schools lack storage and funding to treat the water due to financial constraints, raising concerns about the safety of the water provided in these schools. In addition, inadequate numbers of hand washing facilities and lack of soap are other important challenges undermining improved hygiene efforts in the schools that have hand washing facilities. Although the study found that many schools have separate and near proportionate pit latrine facilities for boys and girls as well as for teachers, which to a great extent indicates gender equality and privacy, these facilities are inadequate considering the high enrollment levels and high pupil-drop hole ratios, which were found to be more than twice to thrice the recommended government ratio for both girls and boys.

In addition, the baseline found that achieving gender equity with regard to provision of water and sanitation facilities is still far off due to inadequate provision of special WASH needs for girls such as MHM material, washing facilities inside or near toilets, secure doors to the toilets, and bins for disposal of sanitary waste. Furthermore, achieving equitable access to school WASH facilities is far behind since most of the schools do not have disability-friendly WASH facilities.

The other challenge that many schools face is poorly functioning water and sanitation facilities especially related to borehole hand pumps and water pipe accessories, which most of the schools are unable to repair due to financial constraints. The 58 percent of schools with properly functioning water facilities found in this baseline study are far below the 80 percent target set by the NRWSSP.

Although hygiene promotion such as toilet cleaning, drama or theater presentations, and peer education takes place in schools, it is mostly done in government schools rather than at grant and community schools. This is because government schools have teachers who are trained, have organized pupil WASH groups, and access to hygiene learning material. Inadequate WASH promotion coupled with inadequate toilet facilities could explain the relatively high levels of poor sanitation and hygiene behavior and practices observed in many community schools where pupils use nearby bushes to defecate and urinate as well as practice low levels of group hand washing.

Linkages of schools and surrounding communities were also found in terms of access, use, and repair of water facilities as well as in terms hygiene promotion. However, these linkages need to be strengthened further through greater engagement of beneficiary communities.

6. RECOMMENDATIONS

Based on the findings of the baseline study the following is recommended:

1. SPLASH should work closely with schools and surrounding communities and identify more workable and sustainable ways of locally financing water treatment, soap provision, construction, and repair of WASH facilities in schools

2. SPLASH should promote increased public investment in school hand washing facilities, special WASH needs for girls in schools such as MHM, disposal bins, secure toilet facilities, etc.

3. SPLASH should lobby government for the construction of more secure toilet facilities to reduce the pupil-drop hole ratio to the recommended ratio

4. SPLASH should promote design, location, and provision of disability-friendly WASH facilities in schools

5. SPLASH should undertake training of teachers, establish WASH groups for pupils, and provide hygiene learning material in schools especially community and grant schools

6. SPLASH should promote increased WASH promotional activities in schools and surrounding communities spearheaded by pupils, teachers, and local theater or drama groups

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8. ANNEXES

Annex 1: Baseline Questionnaire

Annex 2: WASH Baseline Indicators

			District					School Type		
	INDICATOR	Overall	Chadiza	Chipata	Lundazi	Mambwe	Vubwi	Community	Government	Grant
A	School Demographics									
1	Pupil enrollment levels (boys)	129,499	9,233	61,752	42,773	11,639	4,102	19,720	102,886	6,893
2	Pupil enrollment levels (girls)	124,052	10,243	60,318	38,491	10,910	4,090	18,945	98,852	6,255
3	Pupil absenteeism (% boys)	19.7	13.3	18.9	22.3	20.3	18.9	23.2	19.4	15.4
4	Pupil absenteeism (% girls)	18.5	13.6	18.1	20.9	18.5	15.9	22.4	18.0	15.7
5	Pupil drop-out rate (% boys)	3	11	2	3	3	2	4.7	3.1	1.7
6	Pupil drop-out rate (% girls)	3	3	3	4	3	2	4.9	3.2	1.8
6	Teacher-pupil ratio	73	47	82	70	76	67	64	75	71
B	Availability of WASH Facilities in Schools									
1	% of schools with water supply points	71	80	74	66	66	75	35	88	89
2	% of schools with water storage facilities	33	16	38	26	51	35	21	38	47
3	% of schools treating water for drinking	12	2	13	11	16	5	9	13	21
4	% of schools with toilet facilities	92	92	93	93	84	100	80	98	100
5	% of schools with hand washing facilities	31	49	29	23	49	65	12	40	58
6	% of schools with soap at hand washing facility	6	2	7	3	18	0	3	7	11
7	% of schools providing for special WASH needs for girls									
	7.1 % of schools with MHM	3	0	4	4	3	0	1	5	5
	7.2 % of schools with clean water inside girls' toilets	2	6	2	2	0	5	1	3	0
	7.3 % of schools with hand washing inside or near girls toilets	27	57	25	21	31	35	8	35	53
	7.4 % of schools with disposal bins for soiled sanitary material	5	2	9	2	2	0	1	6	21
	7.5 % of schools with doors to girls' toilets	9	24	8	6	18	15	6	11	11
	7.6 % of schools with door locks to girls' toilets	3	4	3	3	5	15	3	3	11
8	% of schools providing for needs of boys									
	8.1 % of schools with urinals for boys	7	6	3	0	2	0	0	3	0
	8.2 % of schools with doors to boys' toilets	2	16	8	4	11	15	5	9	11
9	% of schools with separate toilet facilities for boys and girls	82	90	85	79	75	100	60	94	89
10	% of schools with clear paths to toilet facilities for boys	74	90	73	71	77	90	54	84	89
11	% of schools with clear paths to toilet facilities for girls	90	72	69	79	90	90	52	84	95

C	Adequacy of Toilet Facilities									
1	Drop hole ratio for boys	77	55	90	68	98	50	82	76	76
2	Drop hole ratio for girls	70	56	83	60	88	44	77	70	60
D	Access of WASH Facilities by Disabled People									
1	% of schools with disability-friendly WASH facilities	15	14	14	19	5	10	10	17	5
2	% of schools with facilities located in safe & convenient places	62	69	64	58	66	60	43	71	79
E	Access of School Water Facilities by Surrounding Communities									
1	% of schools sharing water facilities with communities	65	82	63	62	62	85	32	81	68
F	Status, Functionality & Maintenance of School Water Facilities									
1	% of schools with functioning WASH facilities	58	29	56	67	67	25	85	44	63
2	% of schools with O&M funds	17	18	19	14	18	25	3	23	37
G	Hygiene Promotion in Schools and Communities									
1	% of schools practicing group hand washing	8	18	7	6	8	0	2	10	11
2	% of schools with teachers trained in hygiene promotion	23	10	22	31	15	5	9	30	26
3	% of schools with organized WASH group for pupils	22	10	26	24	10	10	8	28	42
4	% of schools with WASH learning material	2	24	11	15	11	10	2	19	21

Annex 3: List of Schools Surveyed and Pupil Enrollment

District Name	School Type	School Name	Girls	Boys	Total	Number of Teachers
Chadiza	Community	Ambidzi	81	60	141	1
		Chamaseche	74	63	137	2
		Khomani	116	117	233	6
		Mwangala	77	43	120	2
	Subtotal		348	283	631	11
	Government	Bwanunka Primary	347	428	775	11
		Chadiza Primary	629	561	1,190	39
		Chafulu	132	82	214	6
		Chamandala	342	244	586	11
		Champhanda Primary	122	113	235	3
		Chanida Primary	269	233	502	15
		Chanjowe Primary	440	411	851	20
		Chanunkha Primary	83	71	154	6
		Chilenga Primary	542	448	990	12
		Chisewa Primary	66	67	133	4
		Chiwongo	174	140	314	7
		Chiyambi Primary	109	148	257	6
		John Primary School	131	161	292	6
		Kabvumo Primary	197	177	374	8
		Kadzionele	270	205	475	7
		Kalemba Primary School	124	100	224	5
		Kalongwezi Primary School	95	107	202	5
		Kamchacha	160	157	317	7
		Kampini primary	221	144	365	7
		Kapachi Primary	370	329	699	12
		Kapirimphika	175	166	341	8

		Kasiya Primary	100	77	177	3
		Katantha Primary	157	159	316	12
		Kaundu	150	117	267	4
		Luli Primary	160	126	286	7
		Madzaela Primary	290	268	558	9
		Mangwe	257	278	535	14
		Manje Primary	297	269	566	9
		Mkumbudzi	164	135	299	12
		Msakanyama Primary	98	108	206	5
		Msokosela Primary	139	131	270	8
		Mtaya Primary	122	115	237	4
		Mwala Primary	226	220	446	12
		Mwangazi Primary	138	147	285	7
		Namwela Basic	156	175	331	7
		Ndapsya	143	118	261	6
		Ngala Primary	133	101	234	2
		Robbie Primary School	127	102	229	7
		Sinalo	143	81	224	7
		Taferansoni Primary	353	294	647	14
		Tigwilizane Primary School	163	155	318	8
		Tikondane	432	385	817	10
		Zemba	423	446	869	16
		Zingalume Primary	214	165	379	7
	Subtotal		9,583	8,664	18,247	395
	Grant	Naviruli Primary	312	286	598	12
	Subtotal		312	286	598	12
Chadiza Total			**10,243**	**9,233**	**19,476**	**418**
Chipata	Community	Chakandapo Community School	53	55	108	2
		Chamadzi	61	85	146	4
		Chamakubi Community	92	66	158	3

		Chambizi	64	73	137	3
		Chamwavi Community School	135	131	266	3
		Chenche Community	51	67	118	3
		Chifunge community school	49	41	90	2
		Chikokola	114	108	222	3
		Chimango Community School	79	93	172	3
		Chinyama	96	178	274	2
		Chipangali scheme b	100	108	208	4
		Chipitule Community School	108	105	213	5
		Chisitu Adventist	214	203	417	4
		Chisomo Streamside School	517	475	992	10
		Chiyembekezo	66	99	165	1
		Chiziro Ethembeni	69	89	158	3
		Chongo Turn Off	142	107	249	1
		Kalanda Thundu Community	66	62	128	1
		Kaleza Community School	90	63	153	3
		Kalungwizi Community School	163	147	310	4
		Kamadzila Community School	145	166	311	3
		Kamukomole Community School	52	53	105	4
		Kamulaseni	53	60	113	2
		Kasenjere	47	79	126	2
		Kasima	93	105	198	2
		Kawiwe Community School	112	157	269	1
		Madalitso Ovc Community School	187	161	348	5
		Mafemula Iri	13	23	36	1
		Magazine Christian Mission Academy	116	123	239	7
		Magazine Community	198	217	415	3
		Magubidi Community	76	86	162	3
		Mainga Community School	56	27	83	2
		Makwelelo	92	73	165	3

		Malochi Community School	202	184	386	4
		Mandondo Community School	73	80	153	3
		Manolo	127	135	262	3
		Manyenje	118	124	242	4
		Mbazima Community School	76	86	162	2
		Mchenga	55	52	107	1
		Mkanda Mateyo	123	123	246	3
		Mkungulu Basic School	145	173	318	4
		Mpapa Community	45	44	89	1
		Mpasala Community School	88	104	192	3
		Muchule Community School	79	110	189	3
		Mululiwa Community	210	185	395	4
		Mushachantha Community School	126	100	226	1
		Mushambo Wa Round Community School	44	55	99	3
		Mwai	39	48	87	2
		Mwazyangulu	103	111	214	3
		Mzilikazi	62	74	136	1
		Ndalunga Community School	77	72	149	3
		Ndembela Basic School	47	57	104	2
		Ng'onzi	102	104	206	6
		Ngwanda	115	126	241	3
		Nkhagawa Community School	153	145	298	3
		Nkhangawa	77	78	155	2
		Ntitimila Community	82	73	155	3
		Paf Luji	144	129	273	4
		St. Mary's Of Fatima	28	26	54	2
		Tekama Community Schoool	65	74	139	2
		Thangata Community School	21	41	62	1
		Thanthwe Community	98	99	197	2
		Thiwi Community School	129	110	239	6

		Vikwelukwelu	165	152	317	5
	Subtotal		6,587	6,759	13,346	191
	Government	Chadyela	174	179	353	3
		Chakhota Basic School	112	89	201	3
		Chakoloma Basic	86	116	202	5
		Chalumbe Basic	499	482	981	11
		Chamakanga	119	142	261	4
		Chamanda	337	315	652	5
		Chamaseche Basic	103	114	217	3
		Chamasongwe Basic	284	289	573	5
		Chambawa	148	178	326	4
		Chambuna Basic	161	161	322	3
		Changoma Basic	151	127	278	5
		Chankhanga	337	311	648	7
		Chankhonzi	271	253	524	5
		Chanyumbu Basic	170	172	342	4
		Chawa	195	201	396	10
		Chibamu Basic	176	224	400	7
		Chideza	170	165	335	4
		Chigumukire Basic	83	73	156	3
		Chigwirizano Basic	36	50	86	3
		Chikando Basic School	387	446	833	12
		Chikoka	230	270	500	5
		Chikokola	104	121	225	6
		Chilile Basic School	199	242	441	5
		Chilobwe Basic	229	293	522	9
		Chimulambe Basic School	139	130	269	5
		Chingazi	319	343	662	10
		Chinjala Basic School	329	336	665	8
		Chinunda	422	392	814	6

		Chipangali Basic School	282	291	573	7
		Chiparamba	502	581	1,083	29
		Chipata Basic	754	790	1,544	14
		Chipembaulo Basic School	162	159	321	4
		Chipembere Basic School	175	213	388	6
		Chipikula	512	546	1,058	10
		Chisitu Basic School	500	556	1,056	9
		Chisomo Basic	169	198	367	5
		Chiswa Basic School	258	259	517	9
		Chiwoko	447	428	875	8
		Chiyambi Basic	241	301	542	6
		Chiziye	184	222	406	5
		Chizukwe	113	117	230	2
		Chizuzu Basic	316	366	682	6
		Dambe	260	284	544	5
		Damview Basic School	315	288	603	12
		Dwankonzi Basic School	298	304	602	7
		Dwansenga Basic	168	219	387	7
		Dzoole	282	254	536	4
		Gondar Basic	987	870	1,857	21
		Gundani	330	313	643	8
		Hillside Basic School	856	673	1,529	17
		Hope Campus Basic	222	224	446	3
		Ikwele Basic School	143	126	269	3
		Jenda Basic School	161	162	323	4
		Jerusalem	183	251	434	7
		Kabele	117	100	217	3
		Kabvala	129	150	279	4
		Kadama	153	140	293	4
		Kadiula Basic School	118	107	225	4

		Kafupa Basic	235	207	442	2
		Kagunda	386	386	772	6
		Kaikumbe Basic School	184	201	385	6
		Kalande	102	118	220	4
		Kalembe	137	160	297	4
		Kalolokhova	214	232	446	7
		Kalunga Basic	290	315	605	9
		Kamboma Basic	283	223	506	5
		Kambwatike Basic	183	187	370	7
		Kamuna	192	220	412	9
		Kamwala	160	175	335	5
		Kantintha	223	238	461	5
		Kanyanja	287	312	599	8
		Kanyindula	153	159	312	7
		Kanzutu	201	192	393	5
		Kapara Basic	537	560	1,097	8
		Kapasa Basic	290	312	602	6
		Kapata	243	222	465	5
		Kapatamoyo Basic	254	289	543	6
		Kaphinde	342	377	719	11
		Kapilimunyanga Basic	80	86	166	3
		Kapita Basic	269	264	533	7
		Kapoko	222	259	481	5
		Kasenengwa Basic	340	372	712	7
		Kasenga Basic School	759	693	1,452	13
		Kasonjola Basic School	383	387	770	6
		Kasukanthanga Basic	131	135	266	3
		Kasukusa	68	54	122	3
		Kasuma Basic	211	245	456	8
		Kasupe Basic	70	84	154	5

		Katambo Basic School	249	257	506	7
		Katandala	529	483	1,012	7
		Katawa	298	349	647	7
		Kataya Matondo	69	74	143	3
		Katondo	105	124	229	7
		Katopola Basic School	1,438	1,329	2,767	23
		Kauzu	107	106	213	3
		Kawambe	234	289	523	5
		Kawawa Basic	179	174	353	5
		Kazimomwe	182	187	369	4
		Kazimule	150	133	283	7
		Kazwanya	239	238	477	5
		Kwenje Basic School	307	269	576	5
		Langa Basic School	220	221	441	6
		Lukhalo Basic School	149	230	379	6
		Lukusuzi	141	154	295	4
		Lunkhuswe Basic	153	151	304	3
		Lunyike Basic School	292	267	559	5
		Luona Basic School	264	283	547	6
		Lutembwe Basic	812	849	1,661	17
		Madzi-Atukia Basic	254	283	537	7
		Madzimawe Basic	364	445	809	9
		Mafuta	356	393	749	7
		Maguya Basic	230	263	493	7
		Magwero Std Basic	287	308	595	8
		Makangila	131	158	289	4
		Makungwa Basic School	267	284	551	7
		Makwe Basic	316	371	687	6
		Masamba Basic School	164	155	319	3
		Matimbanya Basic	202	154	356	4

		Mbenjere Basic School	273	304	577	5
		Mbulanda Basic	140	195	335	5
		Mburwe	163	162	325	5
		Mchenja Basic Schoool	264	300	564	5
		Mchini Basic	655	612	1,267	11
		Mgwazo Basic	219	287	506	8
		Mishoro	190	205	395	4
		Mkanire Basic	300	327	627	8
		Mkhoto	159	104	263	4
		Mkotamo Basic School	165	168	333	6
		Mkwekwe Basic	72	53	125	3
		Mlanga Basic School	72	55	127	2
		Mnduwi Basic	305	281	586	4
		Mnoro Basic	528	548	1,076	9
		Mnukwa Basic School	323	288	611	8
		Molozi	290	310	600	5
		Mpezeni Park Basic School	1,116	938	2,054	21
		Mphunza	170	197	367	5
		Msamaria Wabwino Basic School	196	199	395	4
		Msekera Basic	656	737	1,393	10
		Mshawa Basic	172	205	377	6
		Mtande Basic	233	248	481	5
		Mtaya	283	332	615	8
		Mtewe Basic	246	319	565	5
		Mtizwa	237	253	490	5
		Mtowe	168	188	356	5
		Mukoma Basic School	164	159	323	5
		Mundemba	97	86	183	4
		Munga Orphan Basic School	730	611	1,341	13
		Mwalauka Basic	99	94	193	3

		Mwasauka	228	234	462	5
		Mwita Basic	310	325	635	5
		Nguluwe	191	253	444	5
		Nkali Kali	243	169	412	5
		Nkhoto	239	228	467	4
		Nkhulungo Basic	90	99	189	4
		Nkwinjili Basic School	145	166	311	5
		Nsanjika Basic	656	609	1,265	13
		Nsingo Basic School	331	330	661	7
		Nsumbe	139	169	308	4
		Nthombimbi Basic	190	257	447	5
		Nyafinzi Basic School	112	143	255	4
		Nyakalunga	294	325	619	7
		Nyakatali Basic	188	169	357	5
		Nyakutwa	396	331	727	9
		Nyane Basic	152	168	320	5
		Nyauzi Basic School	231	279	510	7
		Nyaviombo Basic School	409	373	782	8
		Nyongo Basic	230	217	447	5
		Rukuzye	293	280	573	10
		Sairi Basic School	250	301	551	6
		Samuel	225	294	519	5
		Sese Basic School	219	201	420	5
		Shamombo Basic	255	282	537	6
		Sisinje Basic	313	345	658	6
		St Betty Basic	491	400	891	9
		St. Anne's Basic	667	565	1,232	18
		Tamanda Basic	263	276	539	11
		Umodzi Basic	500	483	983	10
		Vizenge Basic	313	313	626	8

		Vuze	236	208	444	5
		Walela Basic	871	858	1,729	17
		Walila Basic Schoool	164	168	332	3
		Zingale Basic School	195	169	364	5
	Subtotal		50,138	51,103	101,241	1,202
	Grant	Chikungu Basic	356	414	770	11
		Jm Cronje	283	348	631	8
		Lunkhwakwa	1,067	1,065	2,132	23
		Magwero Blind Bording	26	37	63	14
		Magwero School For The Deaf	440	540	980	12
		Mwami Basic	367	394	761	16
		Mwami Central Basic	138	196	334	5
		Nadalitsika	422	401	823	6
		St atanasio	494	495	989	9
	Subtotal		3,593	3,890	7,483	104
Chipata Total			**60,318**	**61,752**	**122,070**	**1,497**
Lundazi	Community	Breya	37	28	65	2
		Chafisi	52	58	110	3
		Chagona	185	180	365	3
		Chamkoma Community School	80	59	139	2
		Champero	107	118	225	3
		Champeta Rocks Munkomba Community School	155	136	291	4
		Champhanje	65	51	116	5
		Champheta Alpha	55	82	137	3
		Champheta Magodi Community School	77	61	138	5
		Chandeke Community School	50	37	87	2
		Chanyumbu Community School	182	174	356	5
		Chauluma	37	81	118	2
		Chawama	60	41	101	1
		Chaweya Community School	73	65	138	3

		Chenjeuzi Community School	109	96	205	3
		Chibembe Community School	27	28	55	2
		Chibondwe Community School	68	70	138	3
		Chilingoma Community School	36	27	63	1
		Chilubezi Community	107	97	204	4
		Chimoza Community School	79	67	146	3
		Chinana	25	43	68	3
		Chinkhamu	148	152	300	1
		Chipembere Community School	112	105	217	3
		Chipumulo Community School	128	138	266	2
		Chocha Community School	91	121	212	3
		Donje Community School	91	147	238	2
		Efumbeni Taonga Community School	78	103	181	2
		Ehambeni	39	48	87	2
		Elijah Community School	108	102	210	3
		Greenland Community School	28	29	57	1
		Gumbilwe	125	128	253	3
		Kabelu	88	75	163	2
		Kabindula	67	80	147	3
		Kabulinde Community School	147	179	326	4
		Kachizutu Community School	129	144	273	3
		Kadamusana Community School	142	169	311	5
		Kahuji Community School	53	56	109	5
		Kaikumbe Community School	188	133	321	5
		Kakulo Community	37	32	69	1
		Kalindi Alpha Com	61	99	160	3
		Kaluwe Community School	79	74	153	3
		Kamatete Community School	103	106	209	4
		Kambewa Community School	73	115	188	4
		Kambwili Community School	52	54	106	2

		Kamilombe	98	91	189	4
		Kamkhongono Community School	24	36	60	5
		Kamo IR Community School	109	162	271	5
		Kamphanda Community School	128	125	253	4
		Kamtolo Alpha Community School	132	161	293	4
		Kamwa	127	121	248	3
		Kamwala Community School	155	164	319	8
		Kamwampula	131	119	250	2
		Kangobe	78	84	162	5
		Kanjiba	34	50	84	2
		Kanolo	124	124	248	3
		Kanonono Community School	79	85	164	3
		Kapembele Community School	85	93	178	2
		Kaphodo	39	55	94	1
		Kaponga Hills Ccap Community School	84	110	194	3
		Kasasa	74	87	161	2
		Kasuku Community School	137	153	290	3
		Kataji Community School	38	64	102	3
		Kateme Community School	49	51	100	3
		Katete	114	87	201	3
		Katete Alpha Community School	91	61	152	3
		Katiye	96	103	199	4
		Katondolo	26	51	77	1
		Katope Alpha Community School	81	74	155	4
		Kaulasisi Community School	47	55	102	3
		Kauwo Community School	97	131	228	5
		Kavidilika Community School	57	64	121	2
		Kavikuyu Alfa Community School	21	45	66	2
		Kosongolo Community School	111	106	217	3
		Langwani Community School	36	49	85	2

		Lobi	58	77	135	2
		Lukwizizi	172	163	335	3
		Lupampha Alpha Community School	100	97	197	3
		Lupitila Community School	76	96	172	3
		Magonde	98	91	189	3
		Matembe	144	161	305	3
		Matipa Community School	71	96	167	2
		Maviyambwa Community School	60	90	150	2
		Mazoe Community School	96	111	207	3
		Mbuluzi Alpha Community School	93	119	212	3
		Milulu Community School	35	20	55	1
		Mitondo Communitty School	101	105	206	2
		Mnchenja	64	44	108	2
		Molozi	118	120	238	2
		Mphandupandu Community School	113	97	210	3
		Msazi	65	81	146	2
		Msolomoka	51	74	125	2
		Mtelwe Community School	37	51	88	4
		Mulandabantu	81	92	173	4
		Munthyengu Community School	158	120	278	2
		Mutuwanjovu Community School	163	188	351	4
		Mwasa	58	85	143	1
		Mwendanampingo Community School	186	189	375	3
		Mzongolo	35	40	75	1
		Mzululwa	75	78	153	2
		Ng'ambu Ng'ambu	141	114	255	5
		Njoka	80	74	154	3
		Nthakalavu	83	133	216	8
		Nthanda Communit School	39	21	60	2
		Nyavi Alpha Community School	50	51	101	3

		Nyumbu	95	79	174	3
		Susa Community	78	56	134	3
		Swaswa	71	73	144	3
		Tema Tema	85	106	191	3
		Zaninge Community School	106	56	162	2
		Zobvulume Community School	100	185	285	5
	Subtotal		9,571	10,182	19,753	327
	Government	Bengamafipa Basic School	144	172	316	6
		Beu Basic School	149	173	322	6
		Bokosi Basic School	195	242	437	4
		Bowe M Basic	195	214	409	3
		Boyole Middle Basic School	181	184	365	7
		Chahiro Basic School	153	149	302	5
		Chambuzi Middle Basic	184	249	433	6
		Champhoyo Basic School	256	301	557	5
		Chamsebe Basic School	145	145	290	5
		Changulube Middle Basic School	129	172	301	5
		Chankhama	145	193	338	3
		Chanyalubwe Middle Basic School	189	204	393	5
		Chanyondo	212	240	452	8
		Chaomba Basic School	209	224	433	7
		Chasamwa Basic School	317	351	668	8
		Chasela	305	434	739	8
		Chatemwa	142	168	310	4
		Chazovu Basic School	148	161	309	4
		Chibangu Middle Basic	130	187	317	4
		Chidolo	106	129	235	4
		Chigando Middle Basic School	185	234	419	3
		Chiginya Basic School	296	302	598	8
		Chigona Basic School	170	226	396	3

		Chikomeni	322	353	675	10
		Chikumbi Middle Basic School	159	171	330	5
		Chikuyu	154	208	362	5
		Chilola M.B. School	239	271	510	5
		Chipembere Basic School	278	359	637	6
		Chitala Basic School	242	320	562	6
		Chitungulu Basic School	211	236	447	5
		Chiwe Basic	222	264	486	8
		Chiweza Basic	167	196	363	5
		Chizingizi Primary School	214	211	425	5
		Dambo Basic School	146	156	302	4
		Diwa Basic School	194	188	382	4
		Egichikeni Basic School	359	488	847	10
		Eluangeni	243	279	522	8
		Emusa Basic School	241	282	523	7
		Fyofyo	152	180	332	5
		Gumba	137	137	274	5
		Kabumba Middle Basic School	175	170	345	3
		Kachenche Middle Basic School	153	183	336	3
		Kachunga Middle Basic	149	189	338	6
		Kaithinde Basic School	162	186	348	5
		Kakoma Middle Basic	185	153	338	5
		Kakumba Basic School	132	132	264	5
		Kalungabewa Middle Basic	162	191	353	7
		Kambale Basic School	322	326	648	8
		Kambaza Basic School	143	182	325	4
		Kambeteka	150	146	296	5
		Kamilenje	182	189	371	5
		Kamkwezi	171	185	356	7
		Kam'nyunga Middle Basic School	214	269	483	5

		Kampondo Middle Basic	154	169	323	5
		Kamsaro	140	157	297	5
		Kamsisi Middle Basic	171	178	349	4
		Kamzoole Basic School	184	205	389	5
		Kanele Basic School	458	423	881	7
		Kanyunya Chideza	208	225	433	5
		Kapaipi Basic School	113	116	229	3
		Kapangala Basic School	121	149	270	5
		Kapekesa	124	157	281	5
		Kapichila Chews	308	357	665	9
		Kapili Basic School	318	349	667	5
		Kapongolo Middle Basic School	182	220	402	5
		Kathale	93	113	206	5
		Katopola Basic School	172	207	379	6
		Katube	136	134	270	4
		Katunula Basic School	228	232	460	5
		Kaviskeske Basic School	124	148	272	6
		Kazembe Basic School	207	217	424	8
		Kazinda Middle Basic	184	196	380	4
		Kazonde Basic School	191	242	433	6
		Khulamayembe	184	204	388	7
		Khulikuli	82	146	228	4
		Khuyu Middle Basic School	110	143	253	5
		Luambwa Basic School	210	175	385	6
		Luamphamba Basic School	332	335	667	11
		Luasila Basic School	191	196	387	6
		Lukusuzi Basic	226	362	588	5
		Lumamba Basic School	244	249	493	6
		Lundazi Basic School	755	718	1,473	14
		Lupamazi Basic	185	182	367	7

		Lusuntha Basic School	242	293	535	5
		Malandula	184	222	406	5
		Malawila Basic School	176	156	332	6
		Mankaka Basic School	166	217	383	8
		Manyi Middle Basic School	227	248	475	5
		Mapala Basic School	313	368	681	8
		Masindile Basic School	205	203	408	6
		Masutwe Basic	109	137	246	6
		Mbenje Mb School	202	206	408	5
		Mbuzi,Middle Basic	70	62	132	8
		Mchereka	281	348	629	7
		Mkasanga Basic	199	278	477	7
		Mphamba Basic School	785	871	1,656	16
		Mpheluke Basic	210	224	434	4
		Mphili	183	178	361	5
		Msuka Middle Basic School	121	138	259	5
		Mtimbasonjo Middle Basic School	49	43	92	3
		Mtwalo Basic School	181	239	420	8
		Munyukwa Basic School	381	462	843	8
		Mwanya Basic	192	300	492	6
		Mwase Basic School	427	431	858	9
		Mwasempha Basic School	270	297	567	4
		Mwata Basic School	157	190	347	7
		Mwimba Middle Basic School	205	206	411	5
		Ndaiwala Basic School	181	183	364	8
		Ndundundu	87	98	185	6
		Ng'onga Basic School	250	250	500	5
		Nkhanga Basic School	329	385	714	7
		Nkhanyu Basic School	310	279	589	6
		Nkhazimwene Basic	199	247	446	7

		Nthumbe	120	143	263	5
		Ntitimila Basic School	257	312	569	7
		Nyalubanga Basic School	197	253	450	6
		Nyangwe Basic School	230	225	455	6
		Pharaza Middle Basic School	173	205	378	5
		Phikamalaza Basic School	279	337	616	8
		Romase Basic School	209	208	417	5
		Semphe Basic School	164	204	368	8
		Sikatengwa Basic	418	382	800	8
		Soyo Basic School	124	143	267	8
		Swiswi Basic School	246	278	524	9
		Thunku Basic School	162	180	342	3
		Tigone Middle Basic School	443	477	920	10
		Umi	222	217	439	5
		Vuu Basic School	199	232	431	11
		Vyombo M B School	198	210	408	3
		Yakobe	174	212	386	5
		Zozo Basic	150	146	296	7
	Subtotal		27,456	30,881	58,337	784
	Grant	Chasefu	229	339	568	8
		Chijemu School	114	118	232	7
		Hoya Basic School	319	385	704	9
		Kanyanga Basic School	258	310	568	12
		Lumezi	341	317	658	5
		Msuzi Basic School	203	241	444	8
	Subtotal		1,464	1,710	3,174	49
Lundazi Total			**38,491**	**42,773**	**81,264**	**1,160**
Mambwe	Community	Chaduka Community	60	72	132	3
		Chambobo Community	117	93	210	2
		Chigombe Community School	48	54	102	1

		Chimulambe Community	75	76	151	2
		Chitunda Community	26	25	51	1
		Chombe Community	60	93	153	3
		Hambidzi Community	17	8	25	2
		Holly Hill Community	119	118	237	3
		Kabila Community	61	55	116	2
		Kalengo Community School	59	62	121	2
		Kambwiri Community	114	137	251	3
		Kananvula (Matizi) Community School	52	59	111	5
		Kapita Community	155	159	314	3
		Katapila Community	122	112	234	3
		Kaungo Community School	181	247	428	6
		Lubimbi Community	27	39	66	1
		Lutembwe Community	46	46	92	1
		Malimba Community	183	168	351	4
		Mbuluyenji Community	90	77	167	3
		Mkhuvulo Community	112	133	245	1
		Mnkhanya Community	118	140	258	3
		Mwandakwisano	26	27	53	2
		Nkhuzyeni Community	29	20	49	1
		Sinkhala Community	23	25	48	2
		Tafika	74	63	137	2
		Tafika Community	68	55	123	2
		Uyoba Community School	254	234	488	4
		Vinza Community	73	59	132	3
	Sub Total		2,389	2,456	4,845	70
	Government	Chilongozi Basic School	107	98	205	5
		Chipako Basic	203	262	465	6
		Chisengu Basic	202	228	430	6
		Chitempha Basic	174	207	381	6

		Chiutika Basic School	795	852	1,647	12
		Chivyololo Basic	135	138	273	2
		Chiwawatala Basic	353	419	772	10
		Jumbe Basic	392	406	798	10
		Kakumbi Basic	236	239	475	7
		Kamphasa Basic	237	273	510	7
		Kamuwawa Basic	99	87	186	3
		Kamwanjiri Basic	152	138	290	6
		Kapirisongola Basic	136	162	298	6
		Kasamanda Basic	231	299	530	7
		Kasinga Basic	142	166	308	4
		Katemo Basic	184	233	417	5
		Kawaza Basic School	227	318	545	10
		Malanga Basic	41	39	80	5
		Matula Basic	454	457	911	8
		Mdima Basic	220	266	486	4
		Mfuwe Basic	919	668	1,587	13
		Mphandika Basic	86	103	189	5
		Mphata Basic School	161	217	378	5
		Mphomwa Basic School	216	256	472	6
		Msoro Basic	178	192	370	5
		Ncheka Basic School	337	320	657	9
		Nsefu Basic	216	276	492	8
		Pendwe Basic	76	87	163	4
		Wazaza Basic	226	249	475	6
		Yosefe Basic School	500	521	1,021	14
	Subtotal		7,635	8,176	15,811	204
	Grant	Chikowa Basic	364	417	781	8
		Kamoto Basic	241	248	489	5
		St Francis Basic	281	342	623	8

	Grant Total		886	1,007	1,893	21
Mambwe Total			**10,910**	**11,639**	**22,549**	**295**
Vubwi	Community	Nakhama Community	50	40	90	2
	Subtotal		50	40	90	2
	Government	Chankhandwe	260	251	511	5
		Chigwe Primary	279	306	585	10
		Chipanje Primary	136	128	264	6
		Chithumba Primary School	144	149	293	4
		Kampisandodo Primary	246	260	506	7
		Likawe Primary School	114	100	214	2
		Malaya Primary School	103	91	194	3
		Matemba Primary	245	234	479	8
		Maumba Primary School	74	77	151	2
		Mbande Primary	306	334	640	10
		Mbozi Primary	273	244	517	5
		Mlawe Primary School	101	84	185	4
		Msengelezi Primary	120	111	231	5
		Mzigawa Primary	242	256	498	11
		Nsole Primary	195	209	404	6
		Songeya Primary	126	104	230	4
		Taferadziko Primary School	309	359	668	10
		Vubwi Primary	415	428	843	8
		Zozwe Primary	352	337	689	10
	Subtotal		4,040	4,062	8,102	120
Vubwi Total			**4,090**	**4,102**	**8,192**	**122**
Grand Total			**124,052**	**129,499**	**253,551**	**3,492**